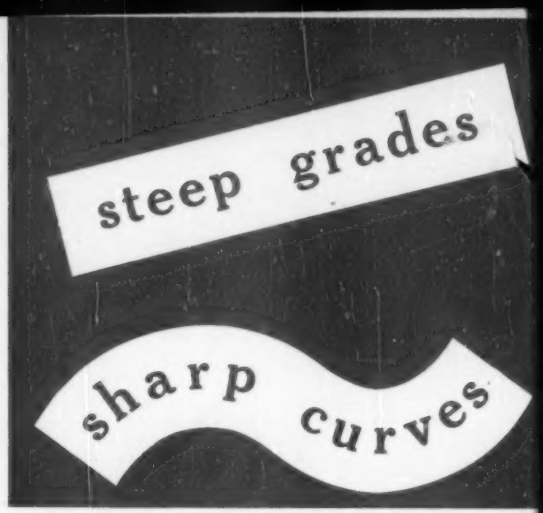
The American City

JANUARY 1954

A Well-Lighted Street Is a Safer Street

Clear Lake, Iowa (population 5,000) is lighted by 20,000-lumen mercury-vapor lamps for safety, comfort, and attractiveness. Spaced 118 feet apart in staggered arrangement, the illumination level is 1.25 foot-candles on a street 50 feet wide.

The paving problem in Manitou Springs, Colo.



Manitou Springs, Colo. is a popular resort, nestling at the foot of Pike's Peak, next to the famous Garden of the Gods. Due to the city's hilly terrain, its streets are characterized by many steep grades and sharp curves.

Exceptional stability is needed in the pavement which serves traffic under these adverse conditions. The hot-mixed Texaco Asphaltic Concrete pavement, which has been laid on a number of Manitou Springs streets, is meeting this test to the full satisfaction of city officials and motorists alike. Aggregate used in the asphalt mix was graded from ½-inch down, resulting in a Marshall stability rating of 3500 pounds or better, and approximately 5 percent of voids.

The 2-inch Texaco Asphaltic Concrete wearing surface is supported by a 6 to 8-inch foundation of stabilized granite gravel. Despite steep grades and sharp curves, the pavement shows no evidence of displacement, even at points where traffic is required to stop.

In more than 1,500 representative cities from the Atlantic to the Rockies, Texaco Asphalt products have been supplying equally satisfactory answers to the paving problem for half a century. These Asphalt Cements, Cutback Asphalts and Slow-curing Asphaltic Oils are refined from scientifically selected crudes. They offer city officials a wide choice of street improvements, from heavy-duty pavement to dust layer. Helpful information regarding all these types of Asphalt surfacing is supplied in two booklets, which can be obtained without obligation by writing our office.

A **19%** grade on Modoc Street

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A **12%** grade on Pawnee Street

A **12%** grade on Minnehaha Street

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JANUARY 1954

The American City

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A Light Forever Burning

A Voice That Is Never Stilled

Night comes on and spreads a blanket of darkness upon sleeping cities and towns. Here and there a lone policeman. In the distance a clock tolling the hour.

In the dark silence of the night there is one light forever burning . . . a voice that is never stilled. That light is the light in the telephone exchange. That voice is the voice of your telephone. Its very presence gives a feeling of security and of nearness to everyone.

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Our Municipal Notebook

As Federal Spending Drops, How Much Construction Is Planned?

AMERICAN CITIES will spend more than $6,000,000,000 on construction in the next three years—$2,374,000,000 of it on public buildings other than schools—according to estimates based on a recent survey undertaken by THE AMERICAN CITY at the suggestion of *Architectural Record*. The figures reflect an increase in number of projects, in average cost of project, and in total expenditure when compared with the past three years and offer some clues to trends in municipal construction of the next few years.

In an article in the January issue of *Architectural Record*, the editor of THE AMERICAN CITY presents in tabular form a summary of the results of this survey, and lists some other reasons for optimism about the municipal building market in the years immediately ahead.

Reprints will be available on application to THE AMERICAN CITY.

A Resourceful Conference Ponders Resources for The Future

AT THE INVITATION of Resources for the Future, Inc., more than 1,300 men and women from all parts of the United States and from several foreign countries spent three days last month at an exceptionally well-organized conference at the Hotel Shoreham in Washington, D. C.

Financed by a special grant from the Ford Foundation, the objective of this "Mid-century Conference on Resources for the Future" was to survey the natural resources of the nation, explore the demands that may be placed upon them during the next 25 years, and investigate methods of use and conservation.

The Conference worked in eight sections, meeting concurrently:

1. Competing demands for use of land
2. Utilization and development of land resources
3. Water resource problems
4. Domestic problems of nonfuel minerals
5. Energy resource problems
6. U. S. concern with world resources
7. Problems in resources research
8. Patterns of cooperation.

Each section held four sessions, the work of which was aided by carefully prepared papers intended to provide the springboard for section discussion; and at the final general session of the Conference each section submitted a report outlining areas of agreement and disagreement and suggesting subjects for future research.

After editing and submission of these section reports to the section (participants) the Conference proceedings are to be published for wide distribution.

Former Ambassador Lewis W. Douglas, Chairman of the Board, Mutual Life Insurance Company of New York, served as chairman of the Conference, and Norvell W. Page as Conference director. Board Chairman of Resources for the Future, Inc., is Horace M. Albright of New York, president of U. S. Potash Company, formerly director of the National Park Service. President and executive director is Dr. R. G. Gustavson, formerly Chancellor of the University of Nebraska.

Headquarters of Resources for the Future, Inc., are at 706 Cafritz Bldg., 1625 Eye St., NW., Washington, D. C.

NAHO Changes Name To NAHRO

THE National Association of Housing Officials, by vote of its membership, has changed its name to the National Association of Housing and Redevelopment Officials.

The addition of the word redevelop-

THE AMERICAN CITY

Harold S. Buttenheim, Editor • **Alden W. Welch**, Research Editor • **William S. Foster**, Engineering Editor
Carl Eric Carlson, Associate Editor • **Carol Hightower**, Production Editor

Editorial and Executive Offices:
470 Fourth Avenue, New York 16, New York • MUrray Hill 5-9252

Edgar J. Buttenheim, President • **George S. Conover**, Vice-President
Edwin Wagner, Treasurer • **Edgar M. Buttenheim**, General Manager
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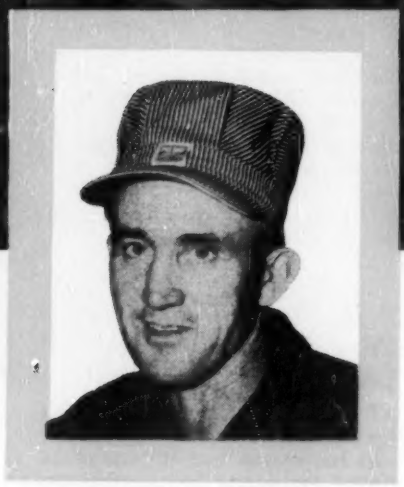

"Not one nickel for repairs!"

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ment to the name does not indicate new activity within the association but brings its name up to date to conform with its long-time activity and interest in redevelopment, the association said in announcing the change.

The purpose of the association has always been to better all phases of public administration in housing and community redevelopment through slum eradication and rebuilding.

The association was one of the sponsors of the pioneering Urban Redevelopment Study. When redevelopment became a formalized program under the Housing Act in 1949, the association that same year instituted its Redevelopment Information Service for public agencies and officials working with redevelopment programs. In 1951, members especially interested in redevelopment set up the Redevelopment Section as a part of the association.

Mayor Morrison Receives LaGuardia Award

MAYOR DELESSEPS S. MORRISON of New Orleans was designated as the 1953 winner of the annual award of the LaGuardia Memorial Association, presented by Newbold Morris, the Association's chairman, at a luncheon in the Waldorf Astoria Hotel, New York City, Saturday, December 12. Charles P. Taft, Cincinnati City Councilman, and leader of the Good Government Movement, was the principal speaker at the luncheon.

The award, for outstanding achievement in municipal affairs, is in commemoration of Fiorello H. LaGuardia, who served as Mayor of the City of New York from 1934 to 1945.

Mayor Morrison receives the award in recognition of his outstanding work on behalf of good government in New Orleans, including the accomplishment of a large-scale public improvement program, and the adoption of a forward-looking new city charter with home-rule features, which went into effect in January 1953 and is reportedly one of the best "strong mayor" charters in the country.

The White House Conference of Mayors December 14-15, 1953

By PAUL V. BETTERS
Executive Director
The United States Conference of Mayors

THE WHITE HOUSE Conference of Mayors, called by President Dwight D. Eisenhower, was held in Washington, D. C., on December 14-15. In his invitation to the mayors and city managers of all cities of the United States over 75,000 in population, the President indicated the meeting was being called to brief the municipal executives on *national security problems*, including civil defense. A meeting of a similar character for the Governors was held last May.

Under the chairmanship of Federal Civil Defense Administrator Val Peterson, President Eisenhower opened the meeting. Among other things the President said:

I assume this is an historic occasion. . . . I know of no other time when the President of the United States felt it necessary to invite to a conference the Mayors of our cities, in order that they might together discuss . . . national security. . . . For the first time in history, cities have become principal targets for any enemy seeking to conquer our Nation. The city has moved from a position of support in the rear. . . . And so that creates problems. They can be solved only if we consult together and act intelligently. I do not mean to say, of course, that the Federal Government is disabused of responsibility —has lost its responsibility merely because the target is a city. Far from it. But now we have got to a place where the matter can no longer be wholly handled by professional or organized military forces, and where we must all act together in the operation of any plan necessary for our safety. . . . In the carrying out of our job here, we intend to do everything that is reasonable, decent and proper in supporting the cities in meeting their own problems. . . . Ordered haste will save you, and panic will destroy you. So it is, first of all, against the incidence of panic that we must be prepared. In other words, there must be understanding produced by leadership, inspired leadership—leadership that is unafraid. . . . We have got, within reason, to be ready. . . .

Following the President's statement a number of Federal officials made briefing presentations on different but inter-related phases of national security. The list included:

Allen W. Dulles, Director of the Central Intelligence Agency; Walter Bedell Smith, Under Secretary of State; Lewis L. Strauss, Chairman of the Atomic Energy Commissioner Roger M. Kyes, Deputy Secretary of Defense; Admiral Arthur W. Radford, Chairman of the Joint Chiefs of Staff; Robert Cutler, Special Assistant to the President for National Security Affairs; Vice-President Richard M. Nixon; Marion B. Folsom, Under Secretary of the Treasury; Arthur S. Fleming, Director of the Office of Defense Mobilization; C. D. Jackson, Special Assistant to the President; Herbert Brownell, Jr., Attorney General; and Henry Cabot Lodge, Jr., Ambassador to the United Nations.

After each statement there was opportunity for general discussion.

A summary of the proceedings was given by Chairman Val Peterson at the closing session on Tuesday afternoon, December 15. Governor Peterson said:

. . . What does all this mean to you as mayors of our great target cities and respected leaders of local opinion?

1. You should assume personal leadership in stimulating public understanding in your communities of both the perils and the promises of this atomic age in which we now live.

2. You should be firmly aware that from now on Civil Defense is a vital part of our daily lives—at all levels of government. It must be a function of government ranking with military preparedness. It is a national undertaking in which each city, county and state must share the problem and the responsibility with the federal government.

3. It is your personal responsibility to see that your city has the legal authority to operate a civil defense program for use in wartime as well as in natural disasters.

4. Vital to the functioning of a realistic civil defense program in your community is an able, full-time CD director, backed up by an adequate Civil Defense staff with funds to operate effectively.

5. Use existing departments of local government as the hard core of your local Civil Defense effort and stimulate mutual-aid agreements and operations with nearby municipalities.

6. Give personal day-to-day leadership in informing the public of the importance of CD and disaster relief preparedness and training, particularly by encouraging the holding of regular CD exercises and air-raid drills in municipal departments and for the public generally.

In the general discussion prior to adjournment, the municipal executives in attendance approved a resolution reading as follows:

We request that the National Security Council reevaluate the whole program of Civil Defense and that the Council suggest responsibilities to be assigned to the respective units of government in continental defense.

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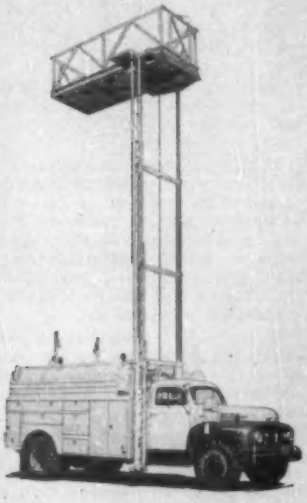

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Housing Recommendations Focus Interest on Urban Renewal

RECOMMENDATIONS of great interest are contained in the comprehensive report of President Eisenhower's 23-member Advisory Committee on Housing Policies and Programs, released to the public on December 15. The report, with more than 50 recommendations, is designed to meet the problems of housing and sound community development through a series of related actions:

(a) A vigorous attack on slums and a broad effort to prevent the spread of slums

(b) The effective maintenance and utilization of existing houses

(c) A steady increase in the volume of building of new houses

(d) Special assistance for families of low income

(e) Reorganization of the Housing Agency itself for greater efficiency and economy.

The Committee unanimously recommends that the program of subsidized low-rent public housing as enacted by the Congress in the Housing Act of 1949 be continued, with several amendments to improve the operation of the program. The recommendations for the liberalization of FHA mortgage loans and procedures to aid the construction of inexpensive housing, and for use in the repair and modernization of the existing housing, have also been hailed for their anticipated stimulus to private building activity.

Major emphasis in the report is placed on the clear-cut need for attacking the entire problem of urban decay through local action, with federal assistance. As a focus for this program, the Committee recommends taking the existing Slum Clearance and Urban Redevelopment Division out of the HHFA Administrator's office, and making it into a constituent agency to be known as the Urban Renewal Administration. This Administration would carry on, in a broadened way, with coordinating powers, the Title I program of the Housing Act of 1949, on community facilities functions and other urban aids in rehabilitation and conservation.

To strengthen rehabilitation and neighborhood conservation activity, the Committee recommends:

1. The establishment of an urban renewal service in the Urban Renewal Administration, to provide technical and professional assistance to communities, at their request, for the planning and development of programs for urban renewal.

2. The allotment of one-third of available capital grant funds to those cities showing the highest level of performance in a positive over-all attack on urban decay, rather than the present basis for strict geographical allocation of funds.

3. The setting aside of a special fund of $5,000,000 to be used in testing, developing, and reporting slum prevention and slum elimination techniques in American communities.

4. Aid for smaller communities and stimulus of planning and action on a metropolitan area basis, through matching grants to state or metropolitan area governmental planning agencies to cover the cost of technical assistance.

The Committee also indicates great concern with the importance of citizen activity, and two of its major recommendations point to the need for a broadly representative private organization—not a direct activity of the federal government—to mobilize public opinion in support of vigorous community action in slum prevention, neighborhood conservation, and other urban renewal activities. The Committee also recommends increased action by both private organizations and public officials to expand the opportunities of minority group families to obtain housing.

The Committee recommends several changes in public housing programs: building at lower densities, with project design conforming better to local dwelling patterns; the possibility of using existing sound structures, rehabilitated; more attention to the problems of the aged in public housing, and revisions, benefiting local governments in tax arrangements for projects.

The full 377-page report is available at $1 per copy from the Government Printing Office, Washington, D. C.

From the U. S. Conference of Mayors To the President of the United States

Recommendations submitted on December 15, 1953

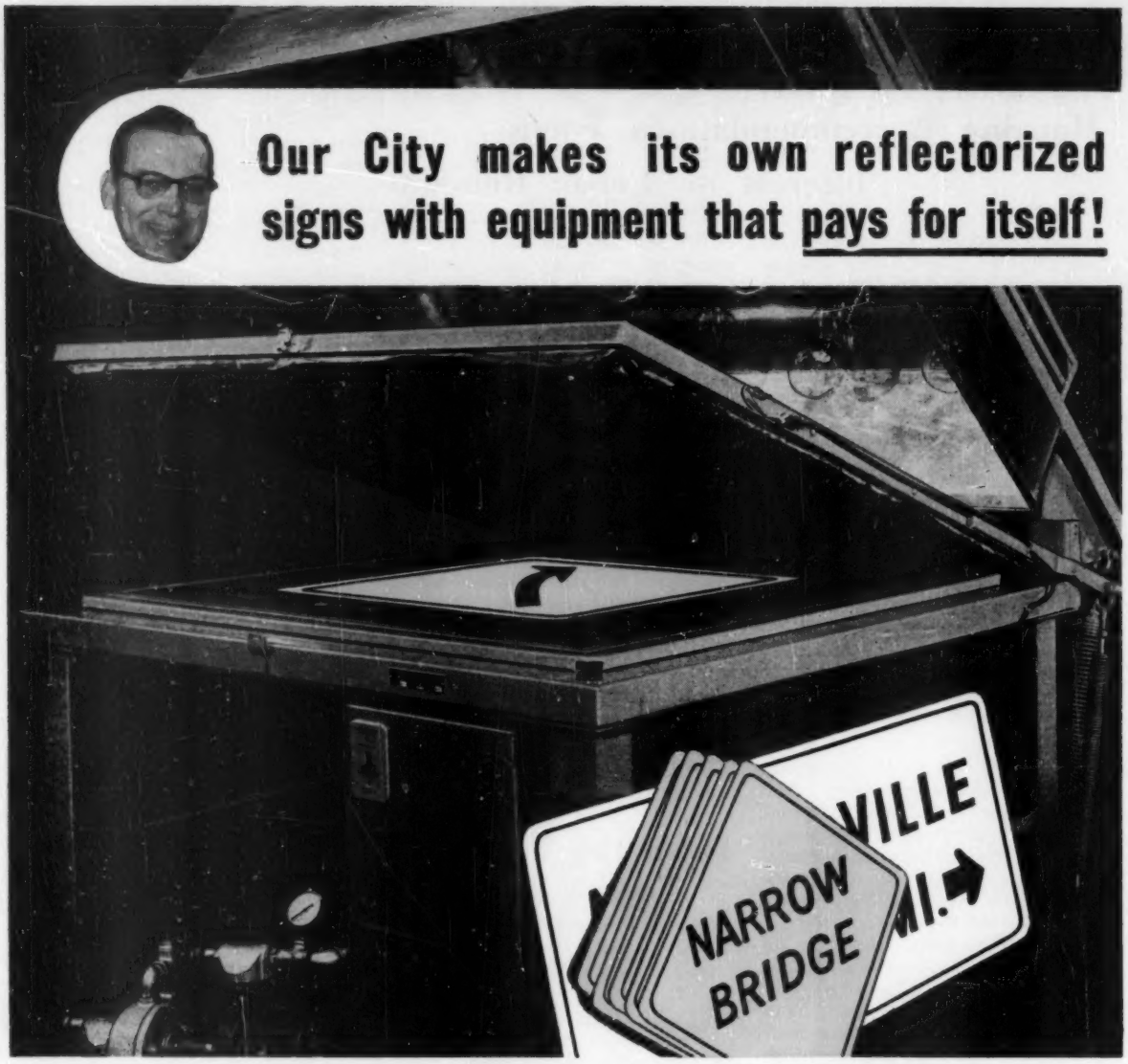
CIVIL DEFENSE. — Civil defense is as basic to national survival as military defense. Both the Preamble to the Constitution and Section 8 of Article I make clear the "common defense" of our country is a fundamental responsibility of the federal government. It is essential, therefore, that sufficient funds for this purpose be requested by the Administration of the Congress. Congressional action on the budgetary recommendation submitted will determine with finality whether or not an adequate civil-defense program is to go forward in 1954.

City and state governments also have grave responsibilities for the protection and care of their people in the event of enemy attack. It is emphasized, however, that the degree to which their accepted responsibilities can be carried out depends largely upon the extent to which affirmation and positive action is taken by the Congress. Existing public apathy can be attributed mainly to the fact that to date the legislative branch of the government has not taken civil defense seriously.

SLUM CLEARANCE AND REDEVELOPMENT.— One national program of most vital concern to cities is slum clearance and redevelopment. We urge a continuing attack on urban blight which exists in practically every city in the Nation. The present federal-city partnership in this field is legislatively sound and is being administered efficiently. If as much federal funds were expended on this activity as is being disbursed for the purchase of surplus butter, the worst slum areas in major cities could be wiped out in two or three years. We urge the Administration to vigorously support an expanded program including relocation housing.

HIGHWAYS AND STREETS. — We deplore suggestions which have been advanced to turn over the federal highway program to the 48 state governments. It is inconceivable that Congress would ever approve legislation of this character. Development of our unified nation-wide network of interstate highways, fundamental to national defense and to the economic life of our country, is only possible under federal supervision and matching of funds. We urge continuation of the present federal program which has contributed so much to our internal development.

WAR PRODUCTION FACILITIES.—Scores of industrial properties in all sections of the United States are not now paying local taxes because title to these war-production plants is vested in the federal government. The assessed value involved totals hundreds of millions of dollars. Equity and justice demand that these installations pay their pro rata cost of municipal services. We urge the Administration to sponsor legislation authorizing payments in lieu of taxes by the operators of these facilities.



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- 6 Sets "Stop Ahead" "Scotchcal" Film cut out letters
- 6 Left turn symbols "Scotchcal" Film
- 6 Right turn symbols "Scotchcal" Film
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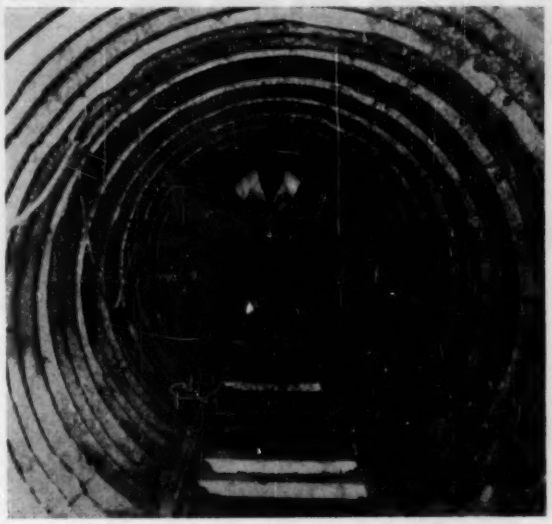
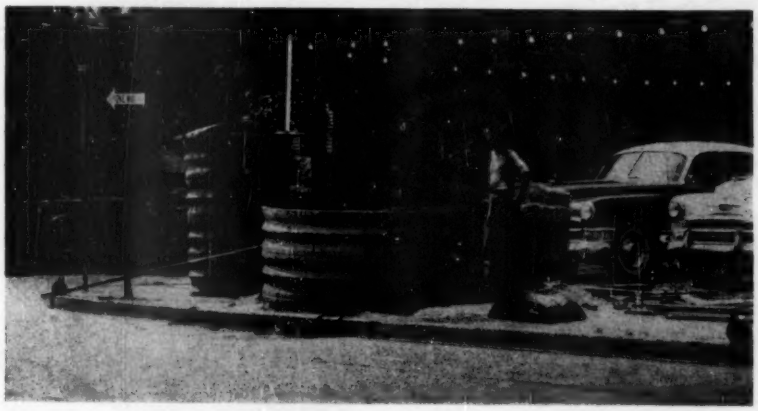
No Traffic Tie-Ups in Charleston, W. Va.

A 48-INCH-DIAMETER sewer is being installed in a busy downtown area of Charleston, W. Va., but John Q. Public is scarcely aware of it because the sewer is being installed by tunneling. If open cutting had been used, several thousand feet of curbs, gutters, and pavement would have been torn up and traffic disrupted for a prolonged period.

The sewer construction program is part of the multimillion-dollar sewer modernization work which includes the construction of a new sewage-treatment plant. The improvement is part of the regional clean-up of the Ohio River required by the Ohio River Compact.

The decision to tunnel stems from the city's consulting engineer, J. E. Settle. The plans direct the contractor to sink shafts at intervals of approximately 400 feet and then to tunnel in both directions. Shafts and tunnels have been constructed of Armco liner plates. About 4,000 feet of the 48-inch tunnel liner have been required, and a smaller quantity of larger-diameter pipe. The tunnel runs between 25 and 30 feet deep. The big sewers form the interceptors that carry the sewage to the new treatment plant.





▲ A close-up of the tunnel interior illustrates how the 48-inch tunnel liner plates have been assembled. Earth is brought out in a small cart, pushed along tracks.

◀ Vertical shafts at 400-foot intervals are the only evidence of tunneling operations.

PHOTOS COURTESY OF ARMCO DRAINAGE AND METAL PRODUCTS, INC.

A Yardstick for Sewer Needs

THE PUBLIC'S continuing "flight to the suburbs" has created a sanitation problem for health authorities in these growing areas that often is difficult to solve.

A demand for public sewers usually will develop in suburbs, or metropolitan fringe areas, when population density approximates 125 to 150 or more persons per square mile, according to M. H. Klegerman, of Alexander Potter Associates, New York City. At this point, the soil is no longer able to absorb the leachings from septic tanks.

Frequently, the area may not be embraced by an incorporated municipal government, and a sanitary district or sewerage authority must be established which is empowered to incur debt, collect service charges, with rights of eminent domain and other basic authorities. The creation of such corporate bodies on a drainage-area basis has always proved wise. Frequently, adjoining fringe municipalities successfully make joint use of proposed facilities, or arrange for the parent municipality to receive and treat the sewage. There are 168 metropolitan communities in the nation that are surrounded by fringe communities.

Financial planning should encompass setting aside funds from revenue for future extensions. The initial bond issue, too, should contain provisions for additional issuance to finance extensions when revenue is insufficient and direct assessment not possible.

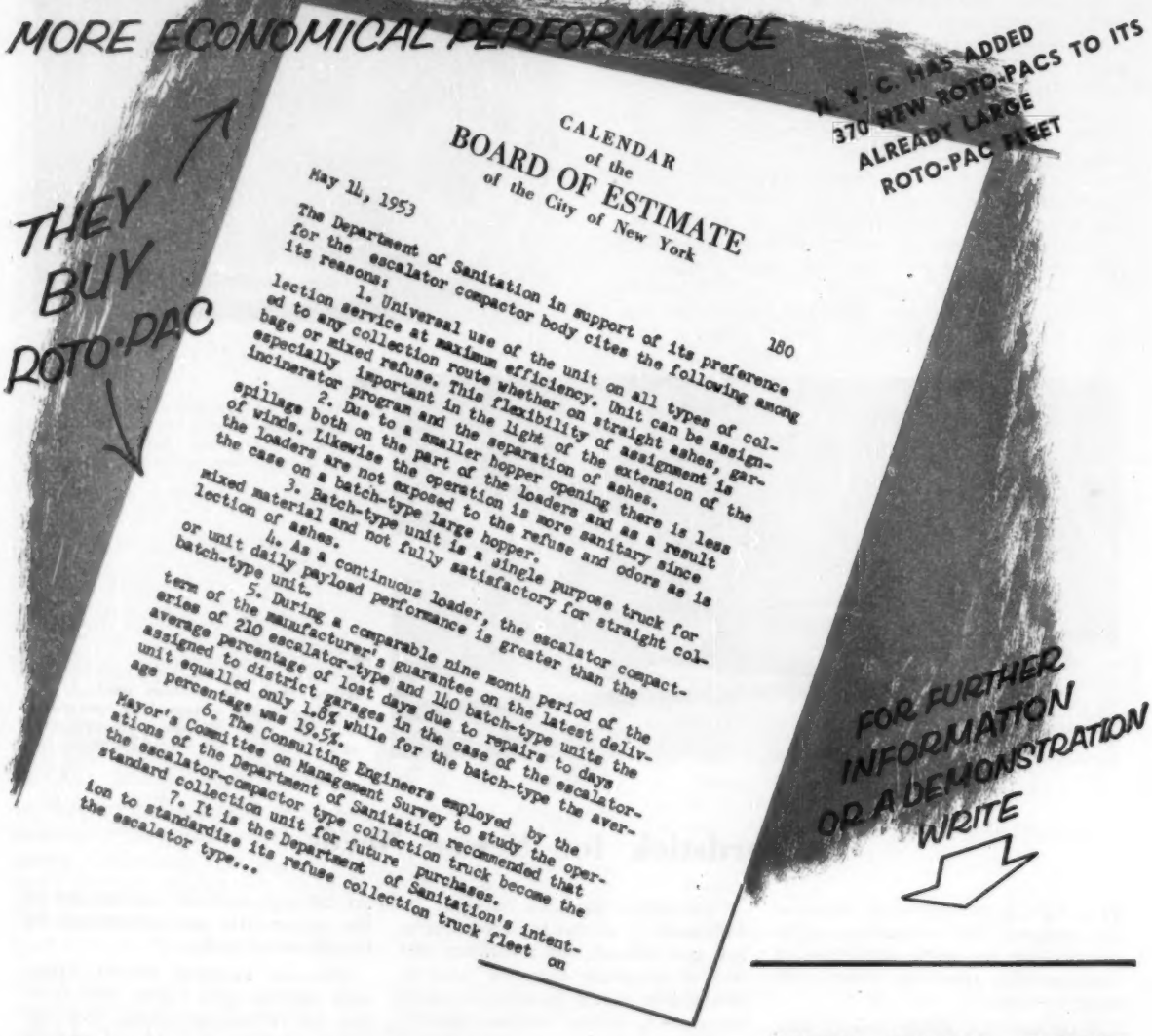
Mr. Klegerman discussed this information at the recent annual meeting of the Federation of Sewage and Industrial Wastes Association.

CITY GOVERNMENTS ACROSS THE WORLD!

RECOGNIZE ROTO-PAC's FASTER, MORE EFFICIENT MORE ECONOMICAL PERFORMANCE

THEY BUY ROTO-PAC

N. Y. C. HAS ADDED 370 NEW ROTO-PACS TO ITS ALREADY LARGE ROTO-PAC FLEET



CALENDAR
of the
BOARD OF ESTIMATE
of the City of New York

May 11, 1953 180

The Department of Sanitation in support of its preference for the escalator compactor body cites the following among its reasons:

1. Universal use of the unit on all types of collection service at maximum efficiency. Unit can be assigned to any collection route whether on straight ashes, garbage or mixed refuse. This flexibility of assignment is especially important in the light of the extension of the incinerator program and the separation of ashes.

2. Due to a smaller hopper opening there is less spillage both on the part of the loaders and as a result of winds. Likewise the operation is more sanitary since the loaders are not exposed to the refuse and odors as is the case on a batch-type large hopper.

3. Batch-type unit is a single purpose truck for mixed material and not fully satisfactory for straight collection of ashes.

4. As a continuous loader, the escalator compactor unit daily payload performance is greater than the batch-type unit.

5. During a comparable nine month period of the term of the manufacturer's guarantee on the latest delivery of 210 escalator-type and 140 batch-type units the average percentage of lost days due to repairs to days assigned to district garages in the case of the escalator-unit equalled only 1.8% while for the batch-type the average percentage was 19.5%.

6. The Consulting Engineers employed by the Mayor's Committee on Management Survey to study the operations of the Department of Sanitation recommended that the escalator-compactor type collection truck become the standard collection unit for future purchases.

7. It is the Department of Sanitation's intention to standardize its refuse collection truck fleet on the escalator type...

FOR FURTHER INFORMATION OR A DEMONSTRATION WRITE

There is nothing faster or more efficient in refuse loading than automatic, continuous loading and packing

There is nothing faster or more efficient than ROTO-PAC

CITY TANK CORP.
53-09 97th PLACE
CORONA, LONG ISLAND, N. Y.

Street Construction & Maintenance

High-Speed Bridge Building

RECENTLY, Binghamton had to replace the old Hotchkiss Street bridge that spans Park Creek. The bridge was a steel I-beam structure with a wood floor, surfaced with blacktop. It was structurally unsafe and the floor had become a constant maintenance problem.

Originally, we planned to rebuild the structure according to the conventional design, using steel I-beams and a reinforced-concrete floor. Circumstances, however, forced us to change this design and, in so doing, saved a substantial amount of construction time.

Delay in Steel Delivery Forces Redesign

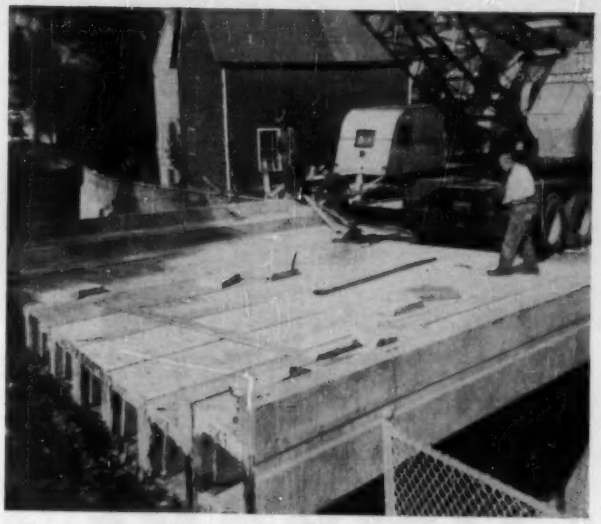
We had closed the bridge to traffic and were proceeding with the work as planned when we learned that the delivery of steel would force a delay of three months. Rather than inconvenience traffic for this extended period, we decided to redesign the bridge, using Universal Concrete Pipe Company precast concrete decking. These sections were readily available, enabling us to put the bridge into service months earlier.

The structure is 30 feet long and has a roadway width of 21 feet and a 5-foot sidewalk on either side. It sets on a skew of about 23° and has a slight grade.

The old abutments, which are built of large granite blocks, were re-used by casting a concrete cap on top of each abutment. The precast concrete decking was then put into place. This operation took one day. The precast units each weigh about 8 tons and are heavily reinforced concrete channels designed to take a H-20-S-16 loading. The units are put in place by a crane, then bolted together to form roadway, curb, and sidewalk. To complete our bridge, we added a 2-inch blacktop wearing surface to the concrete deck and a 4-foot wire mesh fence on either side.

The bridge was put together very quickly. Subsequent use promises few maintenance worries.

REGIS C. MCNAMARA
City Engineer
Binghamton, N. Y.

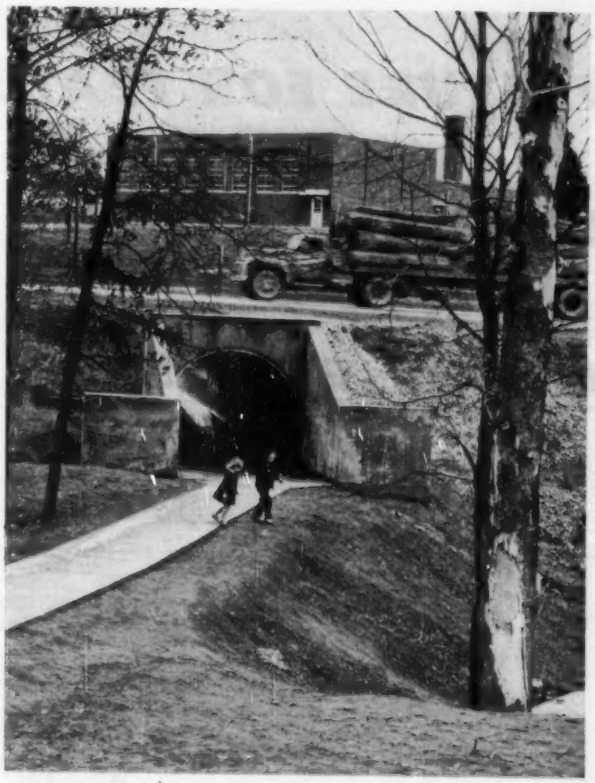


Precast concrete bridge decking slides into place in one day.

Safe Crossing For School Children

CHILDREN on the way to school can cross heavily traveled U. S. 31-W, near Fort Knox, Ky., with absolute safety. Instead of dodging traffic, they can cross under the highway, through a new 75-foot underpass that connects the school with a large housing project.

The underpass was built of 7-gauge steel Armco tunnel liner plates. It was installed in 19 days with no open cutting and no obstruction to vehicular traffic. The cost of the underpass was $25,000.



An underpass eliminates the danger from a school-crossing.

Sherbrooke, Quebec, uses a sturdy Cat No. 112 Motor Grader to maintain 75 miles of road, and to clear heavy snow in winter.

COMPARE IT

FEATURE FOR FEATURE

WITH ANY OTHER

MOTOR GRADER

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CATERPILLAR EASE OF HANDLING

Hand wheel steering with booster gives accurate control *and* genuine "feel" of the road.

COMPARE

CATERPILLAR PERFORMANCE

Weight, power and speed perfectly *balanced* for top performance.

COMPARE

CATERPILLAR BLADE CONTROL

Anti-creep brake mechanism keeps blade where you want it, regardless of load. Blade can be adjusted *from cab* — quickly, easily.

COMPARE

CATERPILLAR VISIBILITY

Lift gears are out of line of vision — operator has full view of road, blade and job.

COMPARE

CATERPILLAR EASY STARTING

Independent gasoline engine starts Cat* Diesel Engine quickly, even in coldest weather.

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CATERPILLAR TRANSMISSIONS

Constant-mesh transmissions give easy on-the-job shifting, prevent gear clashing. Instant changes, from one speed to another as job conditions change.

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CATERPILLAR SERVICE

One service organization—Caterpillar. Every major component manufactured and serviced by your Caterpillar Dealer. Call him for an on-the-job demonstration.

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CATERPILLAR*

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NAME THE DATE... YOUR DEALER WILL DEMONSTRATE

Street Construction & Maintenance

The Reappearing Sidewalk

UNLIKE THE LITTLE MAN who wasn't there, this is the story of the little street that was there all the time. Last summer, a crew was assigned to building a sidewalk along a street in a western New York municipality. However, when they started grading, they discovered one was already there. Furthermore, it had been there all along, buried beneath 20 years of neglect.

All they had to do was to remove the dirt and weeds with the city's Hough Payloader tractor-shovel.

Limit Calcium Chloride in Concrete to 2 Per Cent

ADD calcium chloride to concrete to increase its compressive strength, but don't add more than 2% by weight of the cement. The calcium chloride will decrease the modulus of rupture somewhat. This decrease becomes significant when the amount of calcium chloride added is greater than the 2% limit. These are some of the conclusions offered in Bulletin No. 75, issued by the Highway Research Board, Washington 25, D. C.

This bulletin, entitled, "Effect in Concrete of Pellet and Flake Forms of Calcium Chloride," indicates that calcium chloride in pellet form did a better job of imparting desired concrete characteristics than the flake form.

In either case, however, the strength of the concrete developed much faster with calcium chloride than it did without it. In three days, the calcium chloride concrete was roughly 50% stronger; in seven days, it was about 20% stronger than ordinary concrete. After that age, the differences were slight.

The use of calcium chloride produced greater amounts of air in concrete without air-entraining agents, but apparently did not affect the air content of concrete when these agents were present. The calcium chloride generally increased the slumps of the concrete up to 2%. Greater amounts caused the slumps to decrease.

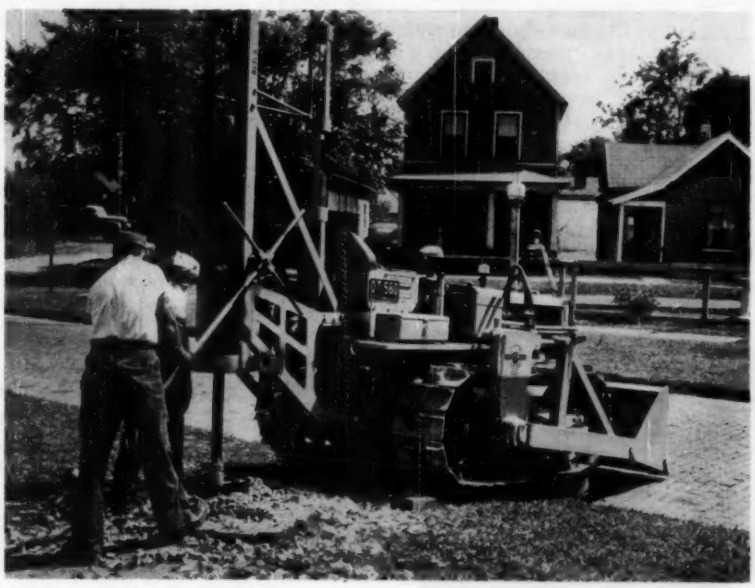
The studies were made by Profs. J. T. McCall and R. J. Claus, School of Engineering, Michigan State College.

Gets Rid of Stumps

ONE PIECE OF EQUIPMENT that the pioneers who cleared the forests could have used is an automatic stump-cutting device. Even in modern days with the mechanical aids that are available, stump removal is a back-breaking, time-consuming job.

Because of a recent development, however, any stump can be reduced to a pile of shavings in short order by the use of a tractor that is equipped with an O'Brien stump cutter.

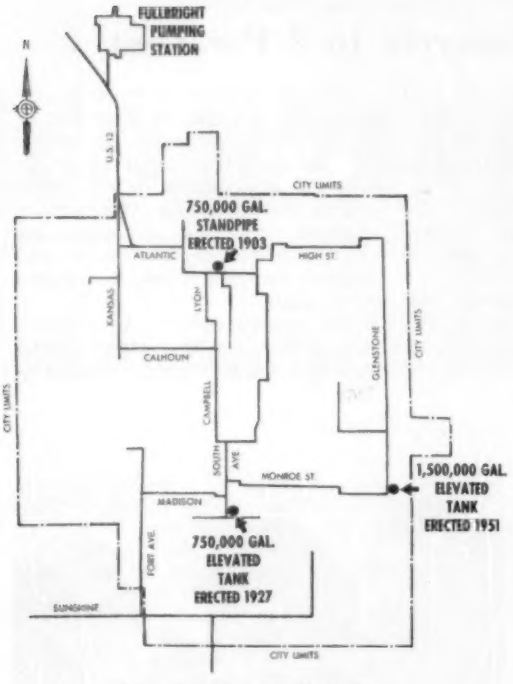
The illustrated stump-disappearing act took place in Toledo, Ohio, where the cutter drilled out an old maple stump in short order. The cutter is mounted on a Caterpillar Diesel D2 tractor that has been equipped with a No. 2S bulldozer.



A GOLDEN ANNIVERSARY

for HORTON* TANKS

at Springfield, Missouri



Map showing mains 10 in. diam. and larger in distribution system at Springfield, Missouri.

For over half a century . . . from 1903 to 1954 . . . Horton® tanks have been helping provide better water service in the city of Springfield, Missouri. It's a record of tried and true performance that speaks for itself.

The first structure built for the Springfield City Water Company . . . and still in service today . . . is a 750,000-gal. Horton standpipe erected in 1903. The second structure is a 750,000-gal. Horton ellipsoidal-bottom elevated tank erected in 1927 and the third, shown above, is a 1,500,000-gal. Horton radial-cone bottom elevated tank erected in 1951. These Horton tanks have helped meet growing seasonal demands in Springfield over a period of five decades.

Perhaps your city's water demand has increased to a point where present facilities are overtaxed. Then write our nearest office today for information on the type of Horton tank best suited to solve your water problems. There is no obligation on your part.

HORTON

WELDED STEEL

STORAGE TANKS

CHICAGO BRIDGE & IRON COMPANY

Plants in Birmingham, Chicago, Salt Lake City, and Greenville, Pa.

Atlanta 3	2114 Healey Bldg.
Birmingham 1	1502 North Fiftieth St.
Boston 10	1002—201 Devonshire St.
Chicago 4	2127 McCormick Bldg.
Cleveland 15	2236 Midland Bldg.
Detroit 26	1501 Lafayette Bldg.
Havana	402 Abreu Bldg.
Houston 2	2101 C & I Life Bldg.
Los Angeles 17	1503 General Petroleum Bldg.
New York 6	3308—165 Broadway Bldg.
Philadelphia 3	1616—1700 Walnut Street Bldg.
Pittsburgh 19	3202 Alcoa Bldg.
Salt Lake City 4	501 West 17th South St.
San Francisco 4	1533—200 Bush St.
Seattle 1	1301 Henry Bldg.
Tulsa 3	1625 Hunt Bldg.

A Neighborly Gesture

WHEN the Water Department at Greeley, Colo., completed laying 12½ miles of 27-inch transmission main, the crews undertook a good will gesture that will make the work easier should another main be laid in the future.

Since truck and tractor travel made the ground hard during construction, the department sent its Allis-Chalmers tractors (below) to clean up the excess that was left after installation of the main. Then (right) the ripper went to work to scarify the hard-packed soil for the farmers who would use the ground for cultivation.

Intermittent Chlorination

INTERMITTENT DOSAGES of chlorine control organic growth in water pipelines just as effectively as continuous application, according to the Board of Water Works Commissioners of Little Rock, Ark.

Little Rock has a 33-mile pipeline that carries water by gravity from Lake Winona to the city's filter plant. The line has an internal diameter of 39 inches and a 4-inch wall thickness. Each section is 16 feet long and weighs about 4¼ tons. The joints were made watertight by a rubber gasket sealed in cement mortar.

Chlorine is now applied intermittently to the pipeline water as it leaves the lake. This method, in use for the past three years, requires substantially less chlorine than the continuous application used previously.

Prior to the adoption of intermittent chlorination, the pipeline water received chlorine totaling 125,000 pounds per year. As a result of present practice, chlorine usage has dropped to an average of 66,000 pounds per year. The chlorine residual entering the plant during the periods of intermittent operation runs between 10 to 12 parts per million.

Little Rock's water system is administered by L. A. Jackson, manager-engineer of the Water Division.

Storage Batteries Unharmed By Fluoride-Treated Water

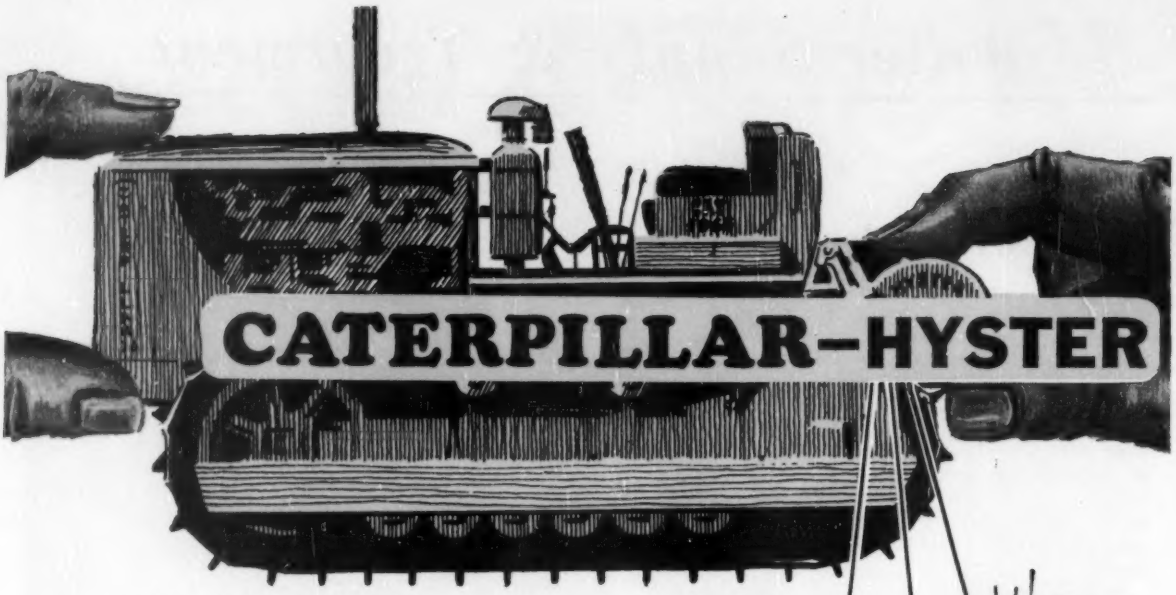
TESTS INDICATE that fluorides, added to municipal water supplies for dental prophylaxis, have no harmful effects on the life of industrial batteries. The tests were conducted at the Gould-National Batteries laboratory at Depew, N. Y., to determine whether supplies of undistilled city water, containing fluorides, were harmful when used to replace water evaporated from industrial batteries.

Fluoride-treated drinking water normally contains one part of fluoride per million parts of water. As water evaporates and is replaced, the chemical accumulates in the battery and may reach a concentration as high as 30 parts per million under the most unfavorable circumstances.

To simulate the chemical accumulation, the laboratory added 86 milligrams of sodium fluoride to one cell in each of three industrial batteries. It then put the batteries on a life test that took them through their life span in a shorter time than under actual operating conditions.

The cell containing treated water, and the two adjacent untreated cells in each battery, were observed throughout the test until all the batteries failed. The cell containing fluoride showed no unusual behavior and, in no case, did it fail before one of the other two cells.

Tests confirm, therefore, that fluoride-treated water cannot injure batteries if the water was harmless before it was treated.



...the RIGHT MATCH in equipment that is your assurance of greater tractor productivity!

For nearly a quarter century, owners of Caterpillar-built tractors have looked to Caterpillar-Hyster Dealers for the *ideas* and *properly-matched equipment* that increase tractor *productivity*.

Today, over 700 Caterpillar-Hyster Dealer stores around the world bring you the *right* tractor equipment for your job plus the two big advantages that Caterpillar-Hyster offers:

"MATCHED DESIGN," the result of close co-operation between Caterpillar and Hyster engineers, which assures the proper operation of the tractor and attached equipment *as one unit*.

"PACKAGED" EQUIPMENT, which brings you *all* the right equipment on ONE order—plus the advantages of dealing with ONE service for all your needs, such as *one* financial plan, *one* source of parts and service, *one* source for ideas on product application.

For information or literature helpful to your job, see your Caterpillar-Hyster dealer or write:

HYSTER COMPANY

2902-61 N. E. CLACKAMAS STREET.....PORTLAND 8, OREGON
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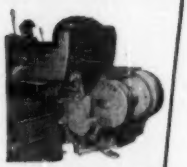
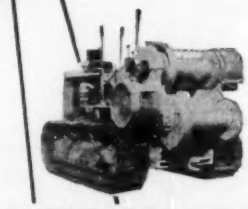


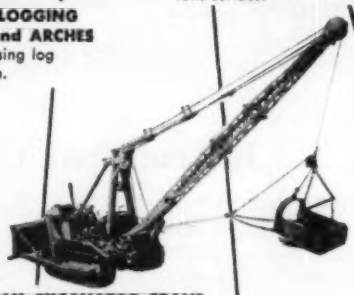
HYSTER WINCHES 19 types and sizes for every application—in construction, mining, logging and manufacturing industries.



HYSTER TRACTOR DONKEY and YARDERS—hoists for all types of pulling and hoisting jobs.

HYSTER GRID ROLLER—the basis of a revolutionary new road rebuilding method which salvages all the old bituminous material, also compacts base, rolls surface.

HYSTER LOGGING SULKY and ARCHES for increasing log production.



HYSTAWAY EXCAVATOR-CRANE —mounts on used or new tractors... convertible to shovel, backhoe, dragline, clamshell, crane, piledriver, *plus bulldozer!*

Wherever you are... there is a Caterpillar-Hyster Dealer near you

THERE'S PROFIT IN HYSTER POWER

HYSTER COMPANY • PORTLAND, OREGON; PEORIA, ILLINOIS; NIJMEGEN, THE NETHERLANDS

Street Cleaning & Snow Removal

Make a Budget Make Sense

PERFORMANCE BUDGETS, not a mere list of materials that you think you will need, is the way to set up a public works department so that it will inspire confidence and show actual operations, according to Jack Gould, director of public works, Richmond, Va. Mr. Gould outlined the elements of a performance budget at the recent annual Congress of the American Public Works Association held in New Orleans.

A performance budget is a budget based on what is to be accomplished, rather than upon what tools are to be purchased with the funds available. The work program and the work unit are the keys to this type of budget. The work program focuses attention on the purpose, function, and activity of the department rather than on the apparatus to be acquired. Work units should be selected carefully to interpret the work in such terms as dollars per square yard of pavement laid; per cubic yard or ton of refuse handled; per street opening; or per foot of trench excavated.

The performance budget has special usefulness in municipal affairs where the taxpayer can readily observe services received for taxes paid and where a decided interest exists in the quantity and quality of the services upon which the budget is based.

PROGRAM AND PERFORMANCE

Street Cleaning
(Acct. #290324.)

Streets throughout the City will be cleaned on the average of once every two weeks except in business areas where they will be cleaned daily. Alleys will be given a general cleaning up semi-annually and certain congested areas will be cleaned more often as required. This service also functions as a part of the environmental sanitation program throughout the City and is coordinated with civic groups in helping keep our City clean.

The work volume and unit costs for this service are as follows:

	Work Volume (Curb Miles)			Unit Costs		
	Actual 1951-52	Estimate 1952-53	Budget 1953-54	Actual 1951-52	Estimate 1952-53	Budget 1953-54
Street Cleaning (Hand)	23,922	24,000	24,000	$5.53	$5.50	$5.76
Street Cleaning (Machine)	15,498	18,000	18,000	6.43	6.39	6.65
Street Cleaning (Flushing)	12,092	13,000	13,000	3.52	3.50	3.64
Alley Cleaning (Miles)	395	300	300	20.10	20.00	20.40

An excerpt from the Richmond budget for the fiscal year 1953-54, pertaining to the Department of Public Works, Bureau of Operations, Division of Street Sanitation. It is made available to the taxpayer and reports exactly what service his money bought.

A Below-Zero Snow Softener

TO SOFTEN CAKED SNOW effectively when temperatures drop below zero, Lewiston, Maine, blends one part of calcium chloride with three parts of salt, Henry J. Aliberti, city engineer, reported.

Snow removal in Lewiston is allotted 10% of the city's budget. The city removes snow from all streets, business or residential, and has spent as much as $16,000 on a single storm.

Salt is applied—as much as one ton per mile—down the center of the street, so that the brine can work its way to the gutters. Four Tarco "Scotchman" salt spreaders perform the operation.

The city also plows sidewalks and spreads them with sand. At one time, a mixture of salt and sand was applied to the sidewalks, but the public objected to the salt being tracked into the homes.

Mr. Aliberti made these disclosures at the recent American Public Works Congress in New Orleans.

One Truckload of Snow Per Minute

ONCE EVERY minute, a truck carrying 10 cubic yards of snow can pull away from the loader used in Cedar Rapids, Iowa, according to Street Commissioner John A. Story. Commissioner Story likes to get the snow away from the curbs in downtown Cedar Rapids so that the money can start dropping into the parking meters again.

The loader that the city uses is an Athey HiLoader, Model 125. The Cedar Rapids Street Department uses it the year around for snow loading levee building, materials handling, and street work.

This versatile piece of equipment is designed to load over the cab of a truck and thus requires only one lane of a busy street.

This loader can keep a fleet of 12 snow-removal trucks busy in Cedar Rapids, Iowa.

The small community can have an adequate fire alarm system

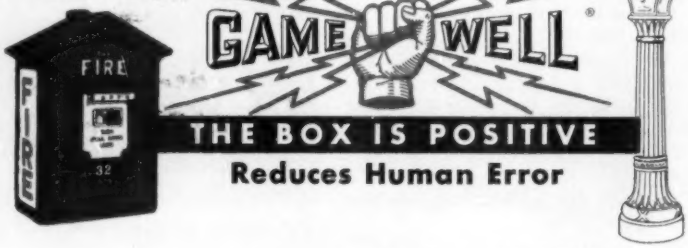
The immediate advantage of the fire alarm box system is that it gives you *instant* and *positive* contact with the

FIRE DEPARTMENT
FIRE CHIEF • VOLUNTEERS
AND RESCUE SERVICE

In addition to fast, positive communication, the fire alarm box system often permits re-rating of the community and a reduction of insurance premiums. Contact your rating bureau for complete and accurate information about this possibility.

As the small community expands, there is no need for the fire alarm box system to become obsolete. Extending the system on a circuit-by-circuit basis is sensible, and not too costly. Thus, at all times you can have the advantages of a big city fire alarm box system.

THE GAMEWELL COMPANY
NEWTON UPPER FALLS 64, MASS.
In Canada: Northern Electric Co., Ltd., Belleville, Ont.



Keep small fires from becoming big fires — with an adequate fire alarm box system.

Public Safety

Redondo Beach Police Publish Booklet for Residents

TO PROMOTE a close bond of understanding between the Police Department and the people of Redondo Beach, Calif., an 18-page, 4-inch-by-6-inch booklet has been published. It contains important information about the department, and explains what a citizen should do when he needs to avail himself of police assistance. Excerpts from the booklet follow:

●

You, the citizen, can aid in the detection and prevention of crime and in the protection of your property by being constantly alert and telephoning the police department whenever you observe anything of a suspicious nature or hear unusual noises at your home or in your neighborhood. For instance, if, on your return home after an absence, you observe the lighting arrangements have been changed, go to your telephone immediately and dial FRontier 2-2131 and state clearly and quickly:

1. What has happened
2. The location where police are needed
3. Give your name, address, and telephone number.

In a matter of minutes, a police car with trained police personnel will be there to assist you.

When leaving your house:

1. Leave a light burning.
2. Never leave notes stating when you will return.
3. Never leave a key to your house under the mat.
4. Make sure all doors and windows are locked.
5. Keep garage doors closed.
6. Upon leaving on an extended trip, call the police station and tell the desk sergeant how long you expect to be away. He will detail a police car to make periodic checks of your premises.
7. Stop your newspaper and milk deliveries. Ask your neighbor to pick up your mail and remove all advertising material and other articles which may accumulate on your porch.
8. Never hide money or anything else of value in dishes, under the mattress, or under rugs.

Insist upon seeing the credentials of any solicitor. When offered merchandise which is very much lower in price than the retail market, call the police at once.

If your home has a rear entrance on an alley, have your house number painted on the fence, gate, or garage door.

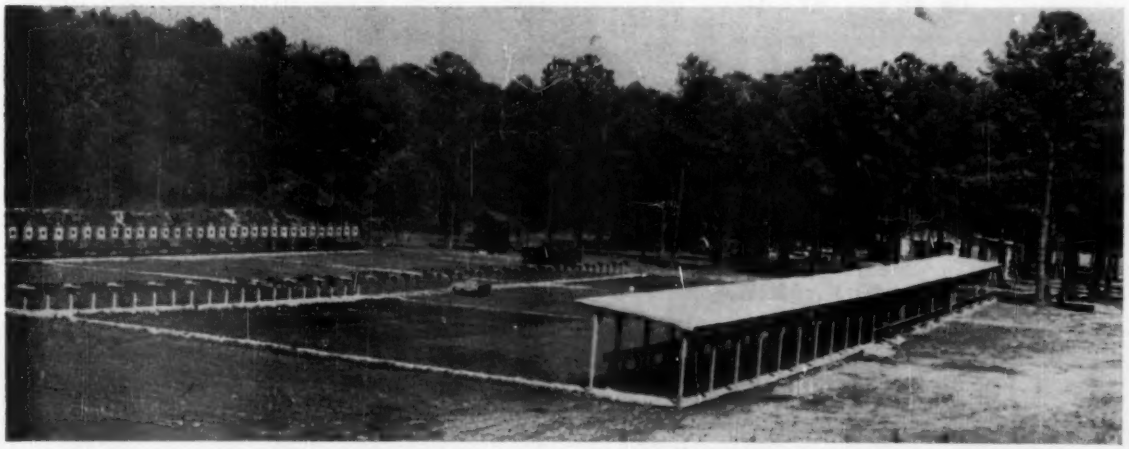
A. LOWELL HOPKINS
Chief of Police
Redondo Beach, Calif.

New Pistol Range of Kinston, N. C., Police

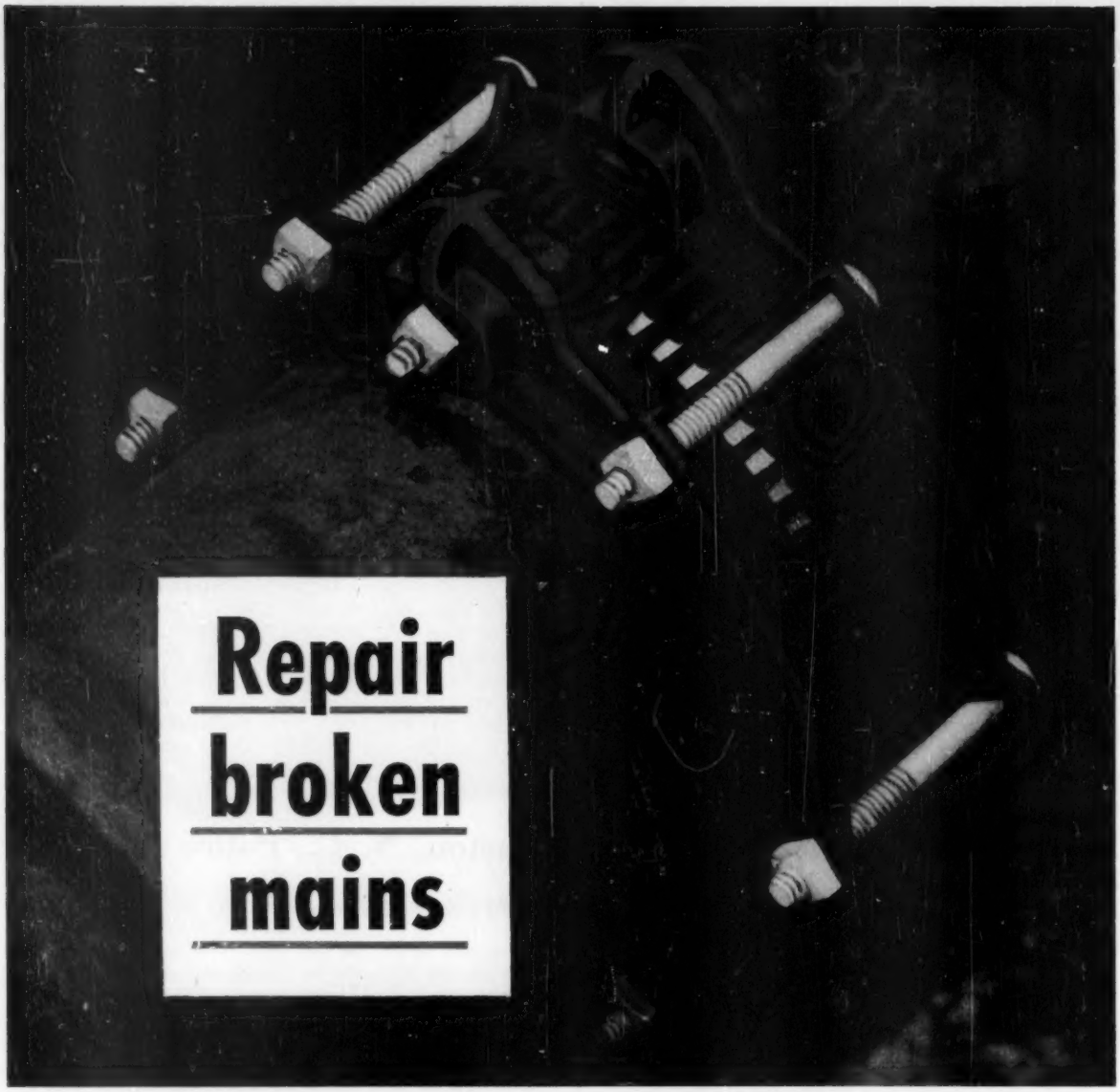
DURING A MATCH at the North Carolina Police Executives' Association meet in 1951 at Wilmington, N. C., Police Chief Marion Haskins of Kinston, N. C., remarked that the Kinston department should have a range equal or better. A site was soon located and the plumbing, carpentry, and landscaping were completed in 90 days.

The improvised range has since grown into a 50-target (50-yard line all covered) range constructed in a beautiful pine thicket. The four-acre site belongs to Simon Jackson, landowner and planter, who has leased the property to the Kinston Police Pistol and Rifle Club for 25 years at $1 per year. The original lease was for five years, but after viewing the improvements, Mr. Jackson volunteered to extend the lease.

W. J. HEARD
City Manager, Kinston, N. C.



The Kinston Police Pistol and Rifle Club range is on a four-acre site leased for 25 years at one dollar a year.



One man — 5 to 15 minutes

In the SKINNER-SEAL SPLIT COUPLING CLAMP, gasket is SEALED at break by Brass Band; at top where compression rings intermesh, by Monel Metal Band. Insures against recurrence of trouble by introducing a degree of flexibility in the line. Each clamp tests to 800 pounds line pressure. Sizes 2"-24" inclusive. Be prepared — order your supply today.

WRITE FOR CATALOG!

M. B. SKINNER CO., SOUTH BEND 21, INDIANA

SKINNER-SEAL SPLIT COUPLING CLAMP

Parks and Playgrounds

Power Mowers Displayed at Meeting

AT A RECENT demonstration in Buckhill Falls, Pa., for more than 60 Worthington dealers and representatives from all over the United States and Canada, several new lines of gang mowers, special mowing tractors, and other equipment were put through their paces. The dealers also had the opportunity to comment upon and make suggestions for the various items demonstrated.

Among the items, which were also shown previously at the American Institute of Park Executives' conference in Denver, was the new Worthington three-gang rotary Blitzer, independently powered by a 13.3-hp Wisconsin air-cooled engine, which cuts a swath 17 feet 2 inches wide through even the toughest growths. Other rotaries were also shown, in 42-inch, 72-inch, and 90-inch units, all available with leaf-mulching accessories.

The new Model F tractor with front-wheel drive and rear-wheel steer was used to show the operation of a Worthington Hydro-Lift gang mower which, with all cutting units ahead of the wheels, offers a large reduction in between-job travel time and also speeds cutting schedules. The Model G Tractor was demonstrated with sickle-bar attachment, and self-lift range units.

This Worthington Model G tractor turned in some striking evidences of hill-climbing ability in pulling nine-gang fairway mowers, evidence of the power of its engine, its low center of gravity, and maximum traction on its 7.50 x 16 dual rear wheels.

For complete information on the equipment, write the Worthington Mower Co., Stroudsburg, Pa.

The new Worthington Model F Tractor, with front-wheel drive and rear-wheel steering, demonstrates the advantages of a Hydro-Lift gang mower, at showing in Denver, Colo.

A Worthington tractor pulls a 9-gang mower up a hill in Buckhill Falls, Pa.

Passaic, N. J., Finds Wild Life Adds Interest to Parks

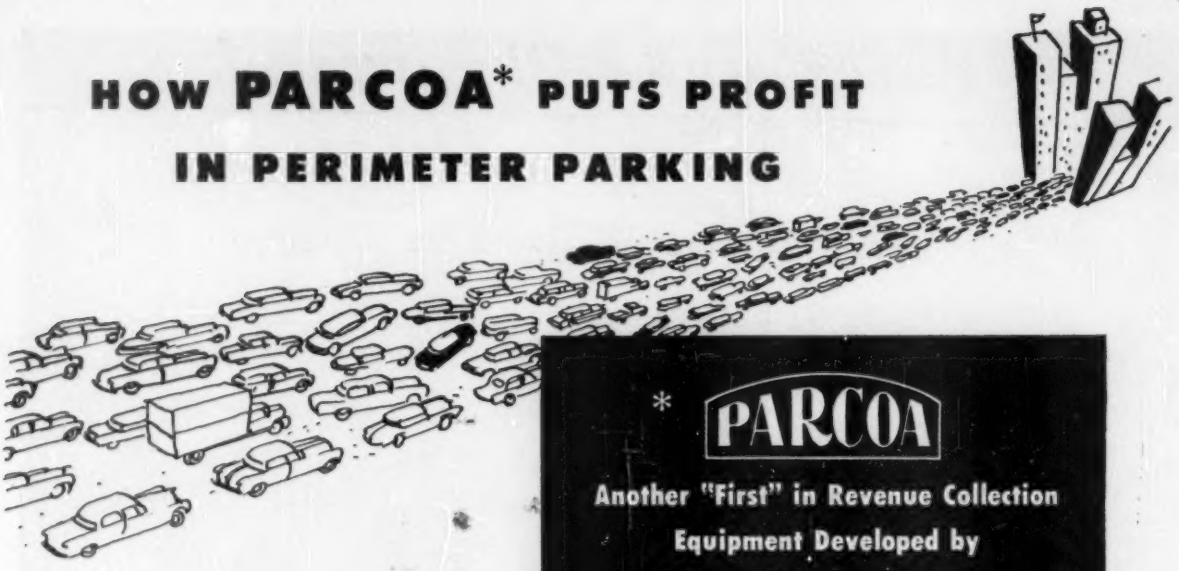
WILLIAM B. CRUISE, Director, Department of Parks and Public Property in Passaic, N. J., reports that adding ducks and deer to the city's eight parks has helped to create interest and attract more visitors.

Two of Passaic's parks are of considerable acreage, and in one is a small lake. Since a number of ducks were purchased at a local poultry market several years ago and put in this lake, hundreds of children and adults have come to visit the park and often to feed these ducks.

Seeing the interest in the ducks, and with the cooperation of the New Jersey State Fish and Game Commission, three deer were later added. The personnel of the Department erected an 8-foot fence covering 10,000 square feet, installed a drinking basin, and constructed a shelter.

Since the deer were placed in the pen, a steady stream of children and adults come to see them, and more people are using the park than ever before.

HOW PARCOA* PUTS PROFIT IN PERIMETER PARKING



* PARCOA

Another "First" in Revenue Collection Equipment Developed by Johnson Fare Box Company

Traffic engineers everywhere are faced with the ever-increasing headache of traffic strangulation and the mounting loss of pay load as more and more riders turn to their own cars for transportation.

Now, Johnson fare collection specialists present the PARCOA Automatic Card-Key Parking System . . . available through the Parking Corporation of America . . . as a practical solution to this twofold problem.

By providing a system which simplifies and facilitates perimeter parking, the PARCOA plan, combined with strategically located parking areas and express shuttle service, offers these direct benefits:

1. Relieves downtown congestion by decreasing car population.
2. Attracts riders you otherwise would not get, and increases revenue.
3. Provides additional revenue from parking operation.
4. Gives automatic parking lot operation without the cost of attendants.
5. Speeds your entire service, thus attracting more riders.
6. Your choice of controls (coin, card, token or any combination) n.. :s this system adaptable to individual requirements.

It will pay you to look into the possibilities of PARCOA for your operation. One of our traffic specialists will be glad to talk it over with you at your convenience. Write, wire or phone today.

The basis of the PARCOA system is a coded card-key which electrically controls entrance and exit gates to your parking area. No attendants are necessary. Only card holders can park. The same card-key can be used for monthly parking and for shuttle bus fares. The system is simple, safe, dependable . . . low in first cost and negligible in maintenance. Write for descriptive bulletin.

A Development by

Johnson Fare Box Company

Specialists in Revenue Collection since 1909

PARCOA

Marketed through its subsidiary...

Parking Corporation of America

33 North La Salle Street, Chicago 2, Illinois, Telephone: ANdover 3-4322

SALES AND SERVICE OFFICES IN PRINCIPAL CITIES

Refuse Collection & Disposal

Sick Hogs Were the Reason

GARBAGE COLLECTION in St. Paul, Minn., is now a completely municipal operation. Hardships encountered by hog feeders as the result of recent vesicular exanthema legislation prompted the city to take over refuse-collection routes from the private contractors this fall and inaugurate a new sanitary landfill refuse-disposal program.

For the collection, the city has equipped itself with a new fleet of St. Paul Pax-all enclosed refuse-collection bodies.

Frank D. Marzitelli (center), Commissioner of Public Works at St. Paul, and A. H. Kock (left), Director of Municipal Equipment, accept delivery of five new Pax-alls.

Junk Cuts Taxes

ROCKVILLE CENTRE, a community of 22,500 on Long Island, N. Y., figures that its village-owned incinerator lops $10 from the tax bill that is charged against every home assessed at $10,000.

If the village were to burn its refuse elsewhere, the cost would be $53,335 per year, based on current burning charges. Last year, the village-operated incinerator cost $64,196, but received an income of $59,133. The net cost was consequently only $5,063, which represents a savings of $48,272, or $10 per home, on the tax bill.

Part of the income came from salvage: paper, metal, cloth, glass, and other materials that were salvable from residents' refuse. This "junk" sold for $24,410. The rest of the revenue came from refuse burned for nearby communities.

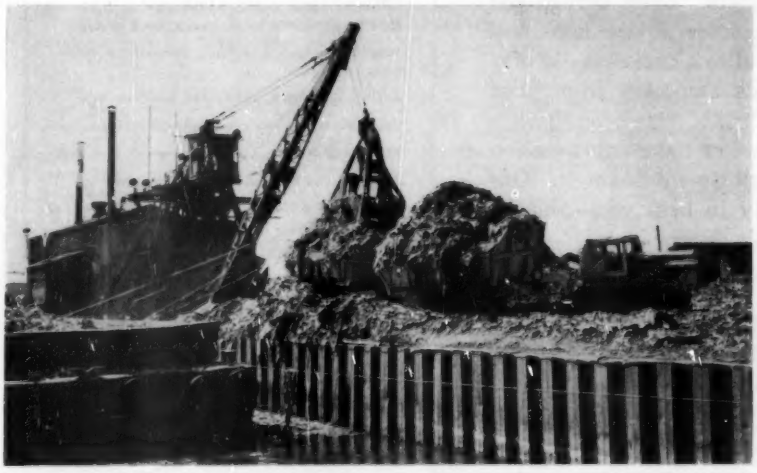
The incinerator functions with Pittsburgh-Des Moines furnaces. Men located along a picking line remove salvable material; the remaining refuse is delivered to the furnaces in specially built conveyors in a less compact, more easily burned condition. The burning is faster and more thorough with this method. Although the plant is well within the village limits, close to commercial and playground areas, complaints about smoke or fly ash are rare.

Robert D. Woodcock is incinerator superintendent and is responsible for the salvage program and other income-producing features.

Savings were also effected in the Sanitation Department. Despite an increase of 382 miles to be covered efficient handling methods resulted in a saving of $1,300 over the previous year—$3,101 less than the budget allotment.

Sanitation Department receipts came to $5,851 for the year from fees paid by contributors of excess refuse.

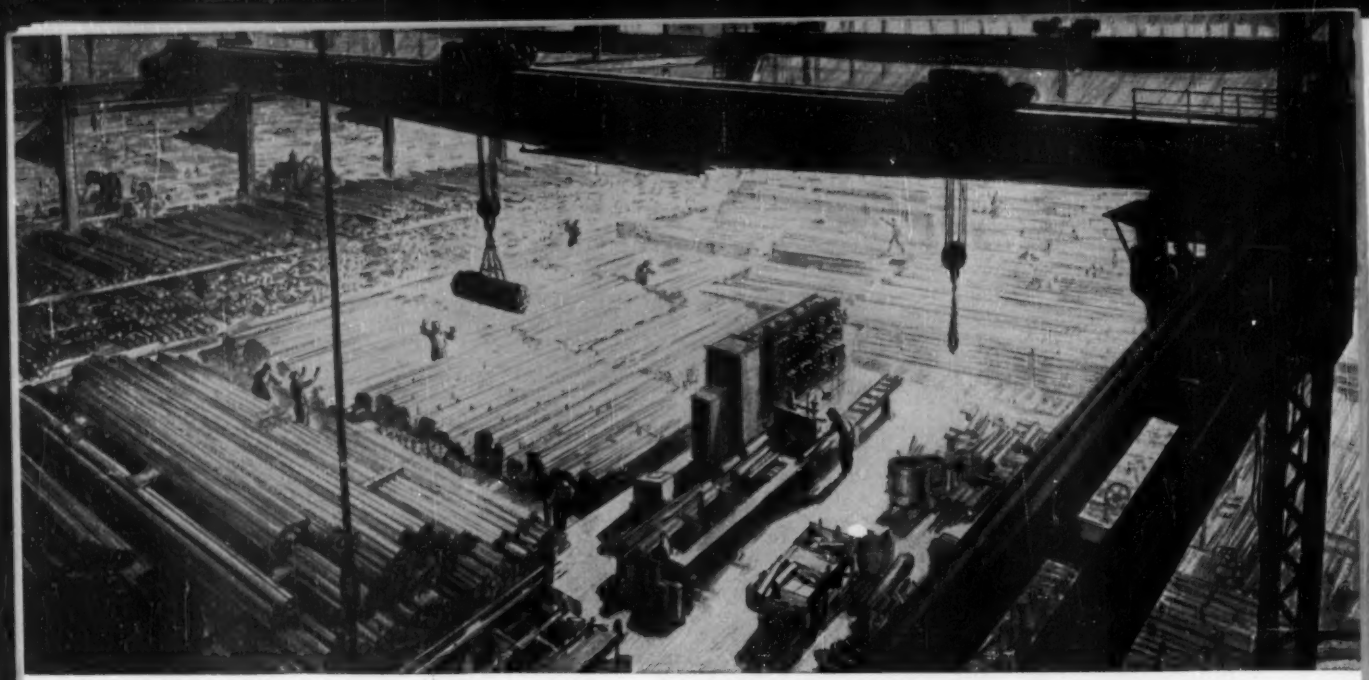
Super-Sized Refuse Operation



The prize for the most massive refuse-handling operation goes without challenge to the nation's largest city—New York. Only a portion of the refuse is delivered by barge to a sanitary landfill on Staten Island, where Caterpillar tractors pull a fleet of Athey wagons, loaded to overflowing with the refuse, from the fleet of barges.

Incinerator Design And Operation

PRACTICAL FACTORS that can be applied to the design and operation of municipal incinerators was described in a paper by W. S. Foster, engineering editor of THE AMERICAN CITY, at the recent APWA Congress. An article that embodies the material presented in this chapter and also draws from a paper previously delivered at the Air Pollution Control Association's annual meeting in Baltimore, Md., will appear in the February issue.



steel stocks...
...again complete!

For years, as you well know, the demand for steel has exceeded the supply. So while we have been able to furnish many thousands of tons from our stocks, all kinds and sizes have not always been available.

Now we are glad to report that our stocks of Ryerson Certified Steels are large and complete. Even though the continuing strong demand still depletes a size here and there, you will find carbon steels, alloys, stainless—everything you need—on hand for quick shipment from your nearby Ryerson plant.

So call us whenever you need steel or have any question regarding what steel to use or how to fabricate it. Our experienced steel men will be ready to help you—and we can promise you prompt, dependable service.

PRINCIPAL PRODUCTS

CARBON STEEL BARS—Hot rolled & cold finished

STRUCTURALS—Channels, angles, beams, etc.

PLATES—Many types including Inland 4-Way Safety Plate

SHEETS—Hot & cold rolled, many types & coatings

TUBING—Seamless & welded, mechanical & boiler tubes

ALLOYS—Hot rolled, cold finished, heat treated

STAINLESS—Allegheny bars, plates, sheets, tubes, etc.

REINFORCING—Bars & Accessories, spirals, wire mesh

BABBITT—Five types, also Ryertex plastic bearings

MACHINERY & TOOLS—For metal fabrication

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Get What You Want—No Charge!

Please check the list of interesting catalogs on this and following pages. To obtain the literature you want, write directly to the manufacturers at the addresses given. If you prefer, you may circle the identifying numbers on this coupon and mail to THE AMERICAN CITY, 470 *Fourth Ave., New York* 16, *N. Y., and we will see that catalogs are sent to you without expense or obligation.* 1/54

915	916	917	918	919	920	921	922	923	924	925	926	927	928	929
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975	976	977	978	979	980									

Name ..... **Position** .....

Address .....

Stops Rust On Water Tanks, Fences, etc.

915 Protect water tanks, fences, fire hydrants, and other metal surfaces against corrosion by applying this specially-processed fish oil vehicle. Rust-Oleom resists salt water, salt air, heat, sun, and smoke. Odor-free, it penetrates rust, baring the metal surface and, in addition, offering decorative protection. For full information you may address the RUST-OLEUM CORP., 2511 OAKTON ST., EVANSTON, ILL.

New Jersey Turnpike Uses Aluminum Lighting Standards

916 A continuous road of 118 miles without traffic lights or crossroads, the New Jersey Turnpike makes use of P & K all-aluminum lighting standards and arms to guide motorists safely ahead. These lightweight installations never need painting. If knocked-down, they are easily salvaged and reused. Standards and brackets are constructed to meet any street, road, or highway requirement. For literature on these aluminum standards, write PFAFF & KENDALL, 84 FOUNDRY ST., NEWARK 5, N. J.

Offers Effective Water Treatment

917 Officials concerned with effective water treatment should appreciate a new booklet on the Precipitator, the Permutit device for removing impurities from liquid by precipitation, adsorption, settling and filtration. Requiring smaller space than previous designs, the Precipitator demands less space and less reaction time. It can be used in water softening, and in the removal of turbidity, taste and odor. *Bulletin No. 2204-B* offers a detailed description of the new unit. Get your copy from THE PERMUTIT CO., 330 W. 42nd ST., NEW YORK 36, N. Y.

New Valve Protects Water Transmission Lines

918 A 6-page brochure that tells water officials how to avoid surge and water hammer damage when filling pipe lines, is offered by the SIMPLEX VALVE and METER CO., 68th & UPLAND STS., PHILADELPHIA 42, PA. The type CCAV valve controls the speed of the line closure, vents air and, if necessary, discharges water. In case of a line break, the valve prevents pipe collapse by admitting air. Further details are included in the new brochure available from the manufacturer on request.

Improved Tapping Machine

919 Formerly constructed of cast bronze, the Hays Model B Tapping Machine has been redesigned with an aluminum body, facilitating both handling and operation. An interesting feature is the renewable brass insert in the feed yoke that reduces maintenance costs. All of the advantages incorporated in the old unit have been retained in the aluminum body. Write HAYS MFG. CO., ERIE, PA.

Let the Sky Turn on Your Street Lights

920 Two new 4-page bulletins on multiple-circuit photo-electric control equipment for street-lighting, are now available from the GENERAL ELECTRIC CO., SCHENECTADY 5, N. Y. Bulletin *GEC-1210* contains detailed technical data on the equipment and its installation and operation. *Bulletin GEA-5141-B* describes outdoor-lighting applications.

Protect City Equipment En Route

921 When municipal equipment is shipped on land, by sea, or in the air, it is exposed to the many hazards of transportation, warns the NATIONAL SURETY MARINE CORP. To avoid serious losses, the company advises the purchase of inland marine insurance. A detailed discussion of transportation, motor-truck cargo, and other forms of marine insurance may be had by writing the company at 4 ALBANY ST., NEW YORK 6, N. Y.

Electric Hand Dryers

922 ELECTRIC AIRE ENGINEERING CORP. introduces a new model electric hand dryer for public washrooms that features a 360° revolving air baffle and a permanent type air filter. Designated the C Model Electric-Aire, the unit incorporates electric-lighted instructions for drying. Also an easy-to-operate touch-action starter bar. For full information, address the company at 209 W. JACKSON BLVD., CHICAGO 6, ILL.

A Simpler Refuse Truck

923 The first step in reducing refuse collection costs is for communities to use collection units that give good service, yet are inexpensive to operate and maintain. This company offers the Pax-all, a lightweight 9- or 12-cu. yd. body, equipped with a hydraulic cylinder that controls every operation: loading, compaction, and dumping. The water-tight body is completely enclosed, with a short wheelbase and low bucket-loading height. Write ST. PAUL HYDRAULIC HOIST, CUSTOMER SERVICE DEPT., 36125 MAIN ST., WAYNE, MICH.

Money-Saving Ideas For Municipalities

924 If it's profitable and efficient to put 150 years' records on microfilm—as Wayne County, Mich., is doing—every town and city should benefit by gaining storage space while preserving its past records. How Wayne County reclaimed 99% of its filing equipment and cut searching time 86% is told in *folder F-262*. How three electric typewriters increased typing production 27% in Mecklenburg County, N. C., is described in *folders RE-8515* and *RE-8499*. Black-on-white copies of records in seconds is money saved, as *folder P-344* shows. For these free folders, write REMINGTON RAND INC., ROOM 1513, 315 FOURTH AVE., NEW YORK 10, N. Y.

Concrete Handling And Placing

925 Officials, engineers and contractors interested in the most modern method of handling and placing concrete, may secure a free copy of a valuable 56-page book on this subject by writing *A. F. Garlinghouse*, GAR-BRO MFG. CO., 2415 E. WASHINGTON BLVD., LOS ANGELES 21, CALIF.

Kitchen Garbage Grinder Reduces Collection Costs

926 A fast-operating unit for a community-wide garbage grinder installation is the Waste King Pulverator. This new garbage disposer operates with less noise. It provides a sanitary method of disposal at the "point of origin." Installed throughout a community, Waste King grinders will decrease garbage collection costs and increase sanitation standards. For a full description of these grinders, write GIVEN MFG. CO., DEPT. AC-11, 3450 WILSHIRE BLVD., LOS ANGELES 5, CALIF.

Provides Low-Cost Street Construction

927 Construct and maintain your city's blacktop streets with the aid of the Spray Master, a bituminous distributor using inexpensive fuel, designed by LITTLEFORD BROS., INC., 453 E. PEARL ST., CINCINNATI, OHIO. Sizes range from 800 to 2,000-gallon truck-mounted, and 1,250 to 4,000-gallon frameless semi-trailer mounted. Request *Bulletin No. 14* from the manufacturer.

(Please turn to page 29 for more Bulletins)

HOLAN Hydraulic and Mechanical Ladders

Cutaway section of Series 2200 Ladder

New clamp-type rung brackets add to rigidity, permit rung removal without tearing down ladder. Standard construction in Series 2100 and 2200.

Reaching your objectives

Whether your overhead objectives be construction, maintenance or service, you'll find speed, safety and ease of operation in Holan Ladders, designed to serve your needs. Add to that the time and energy-saving features and the net results are, "MORE HOLAN FIRSTS!"

SERIES 2200 MECHANICAL TYPE AERIAL LADDER—Full 360° rotation, worm and gear operated by hand crank. *Ladder pivot shaft mounted on roller bearings, counterbalance spring cable operates over sheave mounted on roller bearings. One chrome vanadium alloy spring concealed in mast results in fully counterbalanced ladder. Elevation from horizontal to maximum angle of 72° accomplished by 2½ effortless turns of hand crank controlling pinions and gear segments. Fly section extended and retracted by hand operated windlass with brake. Upper and lower sections insulated for 750 volts. Available in three models —23, 27 and 31-ft. ground to platform heights.

SERIES 2100 FULL HYDRAULIC AERIAL LADDER—Hydraulic pressure is powered by individual gasoline engine integral with ladder or by truck-mounted power take-off. 360° Rotation by hydraulic motor driven worm wheel and gear. Fly section operated by hydraulic winch. Large hydraulic cylinder, permitting low working pressure, elevates ladder to infinite number of positions through 75° working range. Choice of 27', 31', or 35' platform heights.

* Another Holan "First"

J. H. HOLAN CORPORATION
MOBILE EQUIPMENT FOR PUBLIC UTILITIES
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Which Catalogs Interest You?

Write directly to the manufacturers or use the coupon on page 27

Cleaner Streets in Less Time

928 It's easier to keep streets, parks, and recreation areas clean when cities employ this motorized Scavenger, designed by GOOD ROADS MACHINERY CORP., MINERVA, OHIO. Featured are a 14-cu. yd. body, automatic dumping mechanism, and flexible suction hose. This last feature will pick up bottles, cans, papers and other debris within a 6- to 7-ft. span, from either or both sides of the unit. Descriptive literature available on request.

Speed Up Airport Traffic

929 You can release tower operators from a "traffic policeman's" duties—night and day, and, at the same time, speed up airport traffic, by installing Type TGS Taxi Guidance Signs. These signs provide a system of taxiway guidance that shows the pilot his location at each intersection. They tell him exactly how to reach his destination, relieving the tower operator of ground traffic direction. For full information, address the CROUSE-HINDS CO., SYRACUSE 1, N. Y.

Sewer and Pipe Cleaning Equipment

930 Sewer and conduit rods, sewer cleaning machines, and single and multiple-unit engine-drive pipe cleaning machines are among the equipment described in this catalog. Also discussed are buckets, windlasses, root cutters and drag tools, line cleaners, and lateral sets. For your copy, write W. H. STEWART, INC., P. O. BOX 767, SYRACUSE, N. Y.

How to Lay Concrete Pressure Pipe

931 Instructions for laying Price Concrete Pressure Pipe in the quickest, most economical manner, are contained in a new booklet from this company. The pipe is constructed with a simple flexible joint that maintains close tolerances. Recommended laying procedure is with a backhoe. Other methods, however, are discussed. Address PRICE BROTHERS CO., 1830 EAST MONUMENT AVE., DAYTON 1, OHIO.

Winter Street Repairs Need Calcium Chloride

932 In order to facilitate the paving and repair of city streets in cold weather, you can add Solvay Calcium Chloride in mixing your concrete. Not only does this chemical permit positive control at all temperatures, but it provides added cold weather protection, and lowers your costs as well. Solvay Calcium Chloride is also used to treat abrasives, remove ice quickly, and thaw frozen ground for emergency repairs. SOLVAY PROCESS DIV., ALLIED CHEMICAL & DYE CORP., 61 BROADWAY, NEW YORK 6, N. Y., will furnish literature.

Solenoid-Operated Valves For Water Plants

933 These solenoid-operated valves for water plants automatically open or close in response to time clocks, pressure switches, manual switches, or other impulses. They are described, along with full operating instructions, in literature from GOLDEN-ANDERSON VALVE SPECIALTY CO., 2093 KEENAN BLDG., PITTSBURGH 22, PA. Get *Bulletin W-7.*

Improve the Streets In Your Community

934 When paving streets and airfields, asphalt or tar may be mixed with a new rubberized material that will improve the flexibility, impact resistance, and temperature stability of these bitumens. Rubarite is available in fine, dry, gray powder form. Its characteristics and use are fully discussed in literature from RUBARITE INC., BOARD OF TRADE BLDG., 141 W. JACKSON BLVD., CHICAGO 4, ILL.

Handbook for Surveyors And Engineers

935 The 1954 pocket-size edition of the Gurley Ephemeris, including a new chart of Polaris which makes possible an observation of the star within a minute—and with minimum computation—is now available from W. and L. E. GURLEY, 533 FULTON ST., TROY, N. Y. The new edition again contains an Almanac, listing 28 selected stars for determining stellar observations. The Ephemeris will be sent free, upon request, to practicing surveyors and engineers and to instructors and students of surveying.

Complete Your Defense Warning Systems

936 Delay, when it involves the installation of a complete air raid warning system, could bring disaster to the citizens of your municipality. The government encourages communities to add to their warning systems, making them "100% adequate." FEDERAL ENTERPRISES, INC., 8756 S. STATE ST., CHICAGO 19, ILL., manufacturer of a wide variety of air raid sirens and controls, will complete your defense warning program at low-cost.

An Easily Read Street-Name Sign

937 Anticipate the motorist's first question, "where are we?" by providing your community with clean, easy-to-read street-name signs. These embossed signs, designed by the FERRO ENAMELING CO., are constructed of porcelain enamel, fused on high-quality steel. They retain their brilliance permanently. For full details, address the company at 1100—57th AVE., OAKLAND 21, CALIF.

Shows Motor Graders In Action

938 Caterpillar Motor Graders in action, performing such varied operations as contour terracing, ditching and casting, bulldozing and blading for grading construction, and removing snow from municipal airfields, are illustrated in this new folder. Shown are the No. 12, 100-hp grader; No. 112, 75-hp; and No. 212, 50-hp. Get *Form 30822* from the CATERPILLAR TRACTOR CO., PEORIA 8, ILL.

Smooth Finish on Blacktop Jobs

939 To help street departments get a smooth finish on their blacktop jobs the HUBER MFG. CO., MARION, OHIO, introduces a unit that incorporates an adjustable swivel pin and king pin roller bearings. The company manufactures 8-12 ton and 10-14 ton tandem rollers, both of which are described in *Bulletin T-152.*

Cleaning Public Buildings

940 Cleaning the vast lobbies and endless steps and corridors found in schools and other public buildings takes hours of the custodian's day. This time is reduced considerably when tanks and buckets are equipped with mop wringers. Providing fast, simple mopping, Geerpres wringers increase the life of the mop. Water is extracted by a single operation. GEERPRES WRINGER, INC., P. O. BOX 658, MUSKEGON, MICH., manufactures buckets and wringers for every floor size. Write for literature.

Cuts Time on Vertical Meter Settings

941 A good setting for a meter on vertical piping, is the Ford Copperhorn, a simple installation that requires only one or two cuts and threads, yet eliminates the many pipe fittings heretofore used to set a meter upright. The oversized copper tubing and wide, sweeping curves offer virtually no resistance to the flow of water. The setting is permanently aligned for fast meter changes. For *Catalog No. 50,* write THE FORD METER BOX CO., INC., WABASH, IND.

Locates Pipe and Cable Quickly

942 FISHER RESEARCH LABORATORY, INC., 1961 UNIVERSITY AVE., PALO ALTO, CALIF., offers a device that will locate buried pipe lines, metallic conductors and non-metallic sewer pipe, and will find the exact point of obstruction in a plugged sewer, valve, or covered manhole. The M-Scope traces the course of an underground line without contacting the line itself. It determines the difference between a buried pipe and a single metal object, and identifies one buried pipe when others are parallel.

Cranes and Excavators

943 A new product information bulletin was issued recently in the form of a 4-page newspaper called the *Bantam City Press.* It features stories, pictures, and specifications on the company's ¾-yd., 5-ton Crawler Model C-35, as well as specifications and pictures of a specially designed crane carrier, built for the new Model T-35 truck-mounted Bantam. Included are coupons, offering valuable services such as how-to-do-it information on numerous job applications. Copies are available from SCHIELD BANTAM CO., 234 PARK ST., WAVERLY, IOWA.

Encourages Cleaner Streets

944 Incorporate every citizen of the community into your sanitation department by installing sanitary waste receptacles that invite use. Street cleaning becomes easier and less costly when Bennett Bilt receptacles are available for refuse disposal. Each unit is constructed of heavy-gauge corrosion-resistant steel with baked enamel finish, and stainless-steel feet. Address THE BENNETT MFG. CO., DEPT. AC-1-54, ALDEN, N. Y.

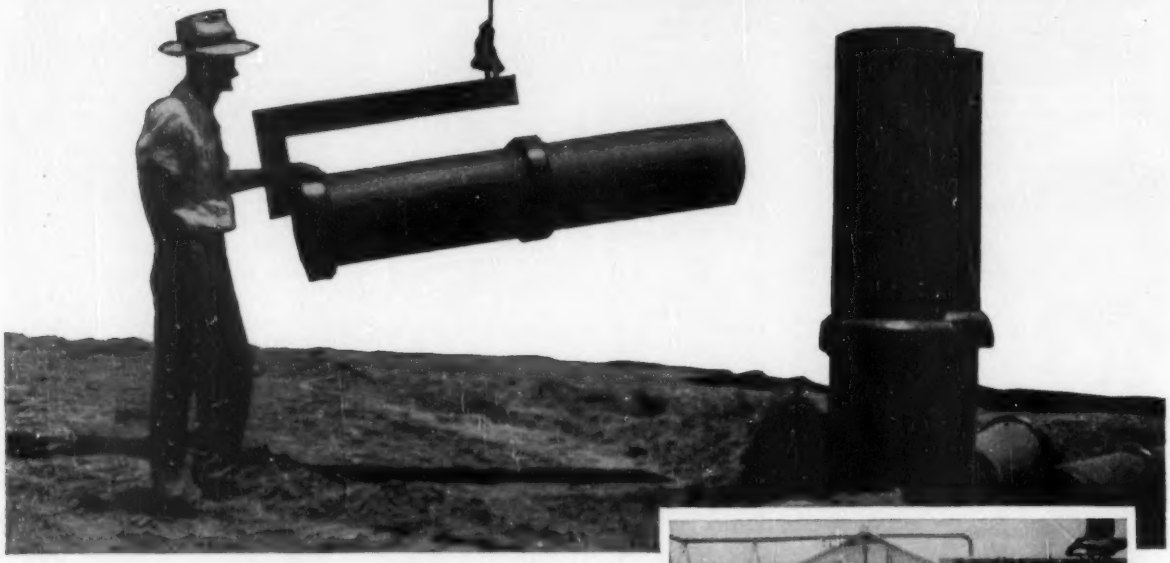
Spreads Salt, Sand or Rock

945 The tail-gate, hopper, and pull-type spreaders made by this company, are well suited to ice control and street construction work. Powered by a hydraulic-, chain-, or power-take-off drive, these units may be used for chipping or seal-coating sand, cinders, salt, pea gravel and aggregates. Address THE FLINK CO., DEPT. 4, STREATOR, ILL.

(Please turn to page 31 for more Bulletins)

When Sewerage Projects are Bond-Financed...

Look for Vitrified CLAY PIPE



When a municipal sewerage project is financed by bonds that won't mature until 1993, the pipe has to be good. It *must* not fail—especially before the bond issue has been retired. That's why city officials and sewerage contractors all over the country confidently specify, buy, and install Vitrified Clay Pipe. They know Clay Pipe is the *only* pipe . . .

- **Completely unaffected by sewage acids and corrosive industrial wastes . . .**
- **Sure to last regardless of the fluids that may flow through it in the future . . .**
- **Guaranteed for 50 years!**

The $27 million bond issue launched by the city of Miami will cover long-needed sewerage improvements that will require hundreds of thousands of feet of Vitrified Clay Pipe. In the 79th St. installation shown here—a small part of the overall project—some 12,000 feet of Clay Pipe were installed. City of Miami officials who directed various phases of this project are: Engineer Arthur E. Darlow, Inspector Frank Allen, and Supervisor of Sewer Design W. B. Lewis. Under the direction of General Contractor Joe Reinertson, Inc., were Design Engineer W. T. Eefting, Job Superintendent Tom Bryson, and Superintendent of Construction Inspection Fred Righter.

Vitrified
CLAY
CLAY PIPE NEVER WEARS OUT!
PIPE

C-154-1

NATIONAL CLAY PIPE MANUFACTURERS, INC.
1520 18th St. N. W., Washington 6, D. C.

206 Connally Bldg., Atlanta 3, Ga.
100 N. LaSalle St., Rm. 2100, Chicago 2, Ill.
703 Ninth & Hill Bldg., Los Angeles 15, Calif.
311 High Long Bldg., 5 E. Long St., Columbus 15, Ohio

Obtain this Literature Free of Charge!

Write directly to the manufacturers or use the coupon on page 27

Small Sized, Big Performing Insect Fogger

946 Many municipal officials have begun effective programs at sewage plants, schools, parks, and garbage dumps, aimed at combating insect parasites. A valuable aid in any such program is the Swingfog, a portable fog maker that generates a dense toxic-charged fog indoors and out, killing mosquitoes and other insects. The unit is said to fog 2 acres in 20 minutes; 35,000 cubic feet in 5 minutes. DEVENCO INC., 150 BROADWAY, NEW YORK 38, N. Y., will furnish literature on request.

Low-Cost System for Sanitary Refuse Collection

947 Using this system of trash and rubbish collection, only one man, the driver of the truck-mounted Dempster-Dumpster, is required for operation. One unit serves many Dempster-Dumpster containers located at various schools, stores, and hospitals throughout the community. These containers are loaded by the user, then picked up, hauled to the disposal area, and emptied. The entire operation is controlled hydraulically from the truck cab. Write DEMPSTER BROS., 814 DEMPSTER BLDG., KNOXVILLE 17, TENN.

A Boon to Meter Reading

948 Meter reading is easier, more accurate, and less expensive when meters are equipped with Magnamatic heads. These automatic tape recorders may be installed on any conventional meter, and will secure readings instantly, printing them on paper tape. The units allow the meter to be read even if it is under water. Re-reading is avoided, and monthly billing greatly simplified. Each head is waterproof, remains free of dirt, and won't break or shatter. Write MAGNAMATIC CORP. of AMERICA, 803 N. MAIN AVE., SAN ANTONIO, TEXAS.

Furniture for Every Laboratory

949 Standard unit laboratory furniture, whether it be for water and sewage works, or for clinical and public service laboratories, is manufactured by W. H. CURTIN & CO., P. O. BOX 118, HOUSTON, TEX. The various pieces of furniture available, their construction and finish, are discussed and illustrated in *Catalog No.* 31, obtainable on request.

Easy-to-Operate Parking Meters

950 The motorist needn't trouble with handles, levers or plungers to operate a Dual automatic parking meter. He doesn't have to turn, pull or push. In fact, he simply deposits a coin and the unit is in business. Traffic departments, too, benefit from Dual meters. Slugs are instantly detected, the time dial discourages cruising, and a red "expired" flag may be seen at a glance. Meters are available in the Dual single head and the new Dubl Dual. Get *Bulletins DU-521* (on-street parking), and *DU-522* (off-street parking), from THE DUAL PARKING METER CO., CANTON 2, OHIO.

Elevated Water Tanks

951 Many Cole elevated tanks have been providing communities with a dependable water supply for close to a century. These tanks are available in capacities ranging from 5,000 to 2,000,000 gallons, and are described in *Tank Talk*. For your copy, write the R. D. COLE MFG. CO., NEWNAN, GA.

Faster Refuse Collection

952 Four loaders in the form of buckets operating independently on tracks, assure quick, automatic loading and an even distribution of refuse throughout the truck. Lightweight aluminum permits the construction of a larger body capable of carrying greater loads. The Quad-O-Matic Refuse Truck is said to cover more ground with fewer men. Address EQUIPMENT MFG. INC., 21550 HOOVER RD., DETROIT 5, MICH.

Offers Low-Cost Ice Control

953 Displayed at a recent A.P.W.A. meeting in New Orleans, this company's new motor-driven sand, salt, and cinder spreader, as well as its Model DD tailgate spreader, are ideally suited to ice-control and seal-coating work. Both current additions to the Hi-Way line of spreaders are described in full in literature from the HIGHWAY EQUIPMENT CO., INC., 643 D AVE. NW., CEDAR RAPIDS, IOWA.

Stand-by Power For Emergencies

954 Insure schools and other public buildings against panic-creating power failures, advises FAIRBANKS, MORSE & CO., 600 S. MICHIGAN AVE., CHICAGO 5, ILL. Power failures can best be avoided with a reliable stand-by power generating set. These sets are manufactured by Fairbanks-Morse in capacities up to 40,000 watts. Write for literature.

Tennis Courts for Parks, Schools and Playgrounds

955 These tennis court installations for parks, schools, and recreation areas have smooth playing, true-plane surfaces that cost little to maintain. Laykold and Grasstex courts also offer resilient, grit-free surfaces that are playable minutes after rain. Some 8,000 of these courts are now in use in all climatic zones—from Maine to Saudi Arabia. Write AMERICAN BITUMULS & ASPHALT CO., 200 BUSH ST., SAN FRANCISCO 4, CALIF., for a colorful, new booklet.

Treating Water by Demineralization

956 How informed are you regarding the principles of ion exchange? Are you up on the applications of many anion and cation exchange materials? For those who aren't, a known manufacturer of water-treating systems is offering a *Handbook on Demineralizing* that discusses the quality of water obtained from demineralizer systems, multi-stage systems, and mixed-bed units. Also featured are operating results and flow diagrams of exesting plants. Get copies from the COCHRANE CORP., 17th ST., below ALLEGHENY AVE., PHILADELPHIA 32, PA.

Maintenance of Diesel Engines

957 The American Locomotive Co. will furnish an informative 146-page book, *Symposium on Diesel Locomotive Engine Maintenance*, a compilation of many of the papers presented at a company-sponsored symposium held in Schenectady, N. Y., last May. In it you will discover much valuable information on lubricating oils, filters, water treatment, and recent applications of the electron microscope. Write AMERICAN LOCOMOTIVE CO., PUBLIC RELATIONS DEPT., SCHENECTADY 5, N. Y.

Borer Attachment for 75 Series Excavator

958 How this foundation borer operates is explained in *Form F-173*, newly released by the CUSTOMER SERVICE DEPT., GAR WOOD INDUSTRIES, INC., WAYNE, MICH. The attachment, designed especially for the 75 Series excavator, has a revolving cylindrical bucket, and bores a round hole of 25, 36, or 44 inches in diameter. To empty, the bucket is raised and swung away from the hole. According to Gar Wood, the new foundation borer eliminates hand excavation and costly reinforced footings. Back filling, too, is done away with.

Get Rid of Weeds

959 Here is helpful information on a wide variety of chemicals currently recommended for weed, grass, and brush control—explaining what they are, what they're used for, and how to use them. Data on killing brush, trees, and stumps are also included, as are detailed descriptions of the most troublesome weeds encountered. CHIPMAN CHEMICAL CO., INC., DEPT. 22, BOUND BROOK, N. J., will send the 40-page booklet on request.

Cast Iron Pressure Fittings

960 The cast iron fittings furnished by this company are made to A.W.W.A. Specifications for pipe 4- to 12 inches. Spigot ends have reduced outside diameters and are tapered back for a distance of 6 inches. Plugging and filling are avoided. The LONE STAR STEEL CO., P. O. BOX 8087, DALLAS, TEX., will send catalog on request.

Air Compressors Operate For Less Fuel

961 Officials interested in an air compressor that provides more air using less fuel, will benefit from literature available from DAVEY COMPRESSOR CO., KENT, OHIO. *Form E* discusses Davey Super Chief 315-500-600 c.f.m. models, in 4-wheel and skid trailer-mounted units. Model 315 is included with gasoline and diesel engines; Model 500 and 600 are diesel-powered.

Water-Works Valves, Gates, and Floor Stands

962 A touch of a button is all that is needed to gain instant control of Chapman's motor-operated valves and sluice gates for municipal water plants. These units come completely housed to guard against dust and changing weather conditions. Available from the same company are motor-operated floorstands, constructed with all internal wiring complete. You simply bring the power leads into the connection box. Request *Catalog No.* 50 from THE CHAPMAN VALVE MFG. CO., INDIAN ORCHARD, MASS.

Better Waste Receptacles

963 One way to keep streets and parks clean and attractive, suggests Norwich Wire Works, is to equip them with these 10-gauge wire mesh waste receptacles. The units are 28 inches deep, with 21-in. tops and 17½-in. bottoms. They are constructed with 8 vertical braces with an interlocking ring, and an 8-in. deep sheet-metal pan. The entire receptacle weighs some 28 pounds. Another unit, weighing about 18 pounds, is ideal for beaches. Write NORWICH WIRE WORKS, INC., NORWICH, N. Y.

(Please turn to page 32 for more Bulletins)

THE FACTS OF
LIGHT
...AND THOMPSON
Servisafe
METAL POLE UNITS
FACT NO. 1: Modern parkway and street lighting should be designed for appearance as well as efficiency. In keeping with this trend, THOMPSON now offers an exclusive new Metal Pole Unit that features streamlined beauty and assures peak lighting efficiency at all times.
FACT NO. 2: Only THOMPSON "Servisafe" Units incorporate a patented disconnecting and lowering mechanism that permits rapid . . . safe . . . efficient ground-level luminaire servicing by one man.
FACT NO. 3: THOMPSON "Servisafe" Units eliminate all maintenance hazards. No ladders, scaffolding or lifts are needed for luminaire servicing . . . luminaires can be quickly lowered, relamped and cleaned, and then repositioned from the ground. Electrical dangers are eliminated because lowered fixtures are 'dead'.
FACT NO. 4: THOMPSON "Servisafe" Units facilitate low-cost maintenance by saving man hours . . . reducing accidents. Pole-mounted luminaires now can be serviced at a fraction of normal time and cost.
Write for catalog PB-53 for complete details
1755-TE
1. DISCONNECT
2. LOWER
3. SERVICE
4. REPOSITION
5. REPEAT
THE THOMPSON ELECTRIC CO.
1120 POWER AVENUE • CLEVELAND 14, OHIO

Catalogs for You

Write directly to the manufacturers or use coupon on page 27

For Sawing Concrete and Asphalt

964 The ConSaw, a new, cost-cutting unit manufactured by the CLIPPER MFG. CO., 2813 N. W. WARWICK, KANSAS CITY 8, MO., will saw repair patches—water, gas, sewer, and air-line trenches in floors, streets and walks. It will operate quickly on concrete and asphalt streets, sawing contraction joints, and trench and patch openings. Easy to handle, the ConSaw incorporates 3-point suspension that holds the blade straight and a water-spray system that assures adequate coolant. Gas or electric-powered units are offered.

Bird Damage is Costly

965 Birds, it seems, have little respect for municipal property. Pigeons, sparrows, and starlings can be found roosting on many public buildings, resulting in costly cleaning labor and repairs. A way to protect buildings without injuring the birds themselves, is to use Bur-Co bird repellent, a non-poisonous chemical that is safe to use on any surface. The inexpensive compound stops roosting and reduces the building's maintenance costs. Write BURR CHEMICAL CO., 812-814 S. MAIN ST., ROCKFORD, ILL.

Control Amplifiers Facilitate Inter-Communications

966 Public schools and city hospitals should prove especially interested in a new control amplifier that facilitates paging and inter-communications, and operates effectively in times of emergency. Flick one of the switches on the Masco Control Amplifier and you can reach any or all parts of the building. These units (6 to 60 stations), have 28 watts of audio power, 40 watts peak power, and are available with built-in AM-FM radio and phonograph. Write MARK SIMPSON MFG. CO., INC., 32-28 49th ST., LONG ISLAND CITY 3, N. Y.

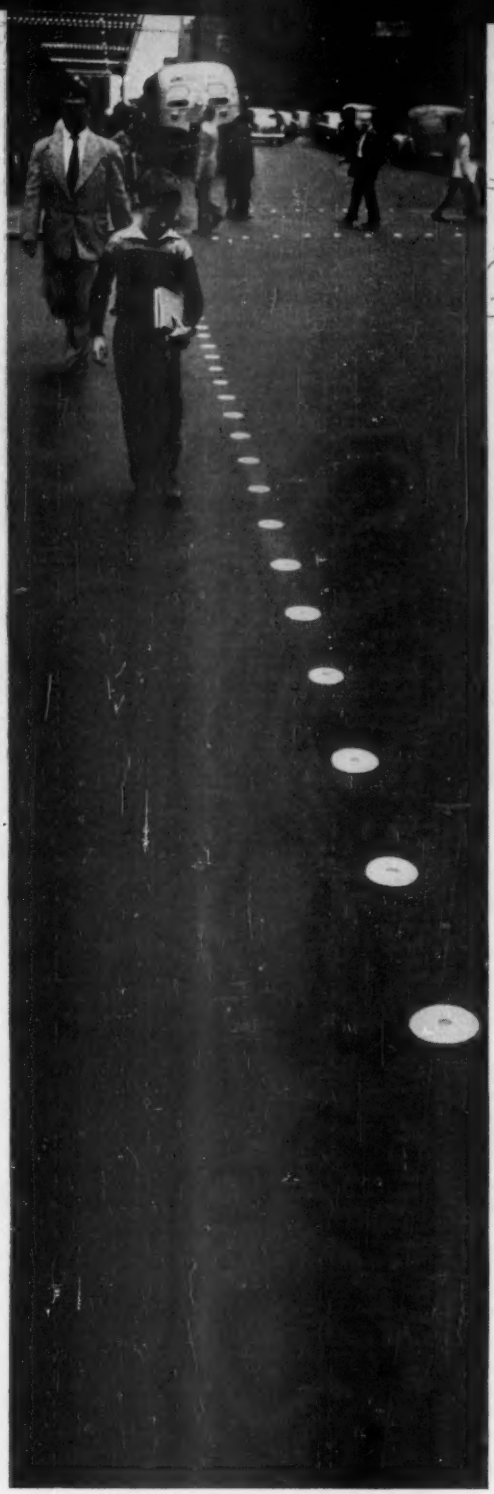
A Leaf Mill That Covers More Ground

967 Park officials will find that this leaf mill is capable of handling greater areas than ten men with rakes, reports the manufacturer. The unit first gathers and pulverizes the leaves, then sprays them out in a fine mulch. Furthermore, the Turbo Jet gets at leaves hidden among shrubs, in Myrtle and Ivy beds, and in ditches. Powered by a Briggs & Stratton engine, it works quickly and efficiently. Write THE TURBO-JET MFG. CO., 22 BOWMAN TERRACE, CINCINNATI 29, OHIO.

A Smooth Loader

968 This big, rubber-tired, front-end tractor-loader is a smooth operator from every angle. Powered by a 6-cylinder engine with torque-converter drive, the new Loadster, Model LC-100, has a smooth, powerful loading action, and equally smooth, positive steering. Moreover, its design puts the weight over the drive wheels, giving you greater traction where it is needed most. For complete information, write CONTRACTORS MACHINERY CO., INC., BATAVIA, N. Y.

(See page 34 for more Bulletins)



Tenite markers line pedestrian crosswalks at the crossroads of the world, Times Square.

greater safety for drivers, pedestrians

traffic markers of durable Tenite butyrate, now being used by municipalities in all sections of the country, are visible two to three blocks away under practically all weather conditions. These brilliant white, yellow, or red disks prove highly effective for marking crosswalks and traffic lanes at busy intersections.

Extremely tough and resilient, the Tenite markers last for years under heavy traffic conditions—eliminate the maintenance problems and costs encountered with painted lines. Their molded-in color cannot chip or wear off, and they resist dirt and tarnishing. Since they require no drying time, they are ready for use immediately upon installation.

In addition to use for municipal traffic control, Tenite markers are ideal for garages, parking lots, and industrial plant areas. For further information, or help in locating a source of supply, write or send coupon to EASTMAN CHEMICAL PRODUCTS, INC., KINGSPORT, TENNESSEE, *sales representative for* Tennessee Eastman Company, *division of Eastman Kodak Company.*

EASTMAN CHEMICAL PRODUCTS, INC., KINGSPORT, TENNESSEE

I am interested in traffic markers made of Tenite butyrate. Please have manufacturers send literature and price information. ☆

Name_____

Title_____

Company or Municipality_____

Street_____

City_____ State_____

AC-1-54

TENITE
BUTYRATE
an Eastman plastic

7-yd. D Tournapull speeds sewer cleanup, other city jobs in Denver, Colorado

Whether city-owned or under contract, modern rubber-tired D Tournapulls are well-adapted to handling municipal maintenance and construction. These 7-yd. units do many jobs alone . . . save money by driving everywhere under their own power.

In Denver, for example, Contractors Jones & Hezlep use their Tournapull constantly for a variety of city and county assignments. Recently, the "D" has been hauling excess dirt away from sewer trenches, backfilling, rebuilding roads and alleys that have been affected by the work.

Self-loading in sandy clay and loam, Tournapull was timed on one of these typical sewer jobs. A 300′ cycle was completed every minute. Loads varied between 4 and 5 pay yards.

Used with a small pusher in tougher material like clay, shale, or mud, Tournapull loads 5 to 6 pay yards.

Drives through city traffic

"I don't know of any other rig," says Partner John Hezlep, "that is as versatile as the D Tournapull. The mobility and fact that you don't have to load up for transportation is one of the things we like best. You can get into a tight spot with them, move your dirt, and get out easily."

"The best all-around piece of equipment we've seen . . . very nice on clean-up work . . . very handy to get around with," adds Foreman Jim Poor.

"It's got 'em all beat!" concludes Operator W. Parr.

Give a D Tournapull a chance in your community. You'll think it's tops, too. Just call us for a demonstration so you can see its advantages first-hand.

Tournapull—Trademark Reg. U.S. Pat. Off. DP-469-A-z

LeTourneau-Westinghouse Company

PEORIA ILLINOIS

More Literature

Write directly to the manufacturers or use coupon on page 27

One Unit Does All Your Sewer-Cleaning Work

969 A thorough sewer cleaning job includes cleaning of the entire sewer wall—top, sides and bottom—and removal of all roots and caked sediment. It takes only one machine to do this job. An Expanding Root Cutter & Sewer Cleaner adjusts to fit any sewer from 8 to 30 inches, in some 30 seconds. For an informative, new catalog on the company's complete line of sewer cleaning equipment write EXPANDING SEWER MACHINE CO., 108 E. WALNUT ST., NAPPANEE, IND.

Rail Steel Used for Sign and Fence Posts

970 Rail steel, according to the H. K. Porter Co., combines lightweight and high tensile strength. This company uses rail steel in the manufacture of Quick-Set steel sign- and snow fence posts, and concrete reinforcement bars. The rail steel provides the units with exceptionally long-life. They are sturdy and fireproof as well. *Catalog* 52, furnished by the H. K. PORTER CO., INC., BUFFALO STEEL DIV., TONAWANDA, N. Y., gives complete information.

Photoelectric Control For Outdoor Lighting

971 Accessories are available with this new Series 64400 Photoelectric Control to facilitate mounting on luminaires, wood pole or cross arms, ballasts, pole tops, standards and mast arms. The small, compact 575-watt control unit costs little, so little in fact, that you can use one per lamp. Write FISHER-PIERCE CO., INC., 94 PEARL ST., S. BRAINTREE, BOSTON 85, MASS., for descriptive literature.

New Earth Boring Trench Machine

972 Cities can use this trench-type McCarthy drill for laying gas, water, and small sewer lines. Rather than necessitate the tearing up of pavement or tracks, the earth-boring unit works underground without stopping traffic. It handles augers 4- to 36 inches in diameter, and drills holes from 10- to 150 feet horizontally. Literature is available on request from THE SALEM TOOL CO., 784 S. ELLSWORTH AVE., SALEM, OHIO.

Bronze Accessories for Water and Fire Departments

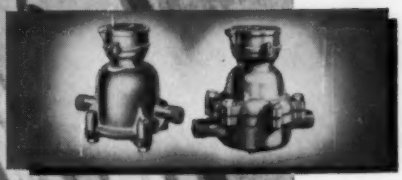
973 Municipal departments find of real interest the new James Jones catalog describing fire-plug valves, hose couplings and hydrant accessories for fire department use; valves, flanges, stops and fittings for water service, and other bronze goods for gas and oil service. Get *Catalog J* from the JAMES JONES CO., 321 N. TEMPLE CITY BLVD., EL MONTE, CALIF.

Why Paint Traffic Lanes?

974 "Plastic buttons," according to the Detroit Traffic Dept., "reflect light better than street paint." They can be seen in practically any weather, and take seconds to install. Where painted lines must be repainted three or four times a year, a plastic button is said to wear at least four years. Mercury markers come in white or yellow plastic. For additional data, write MERCURY PLASTICS CO., 20787 MOUND RD., VAN DYKE, MICH.

(See page 36 for more Bulletins)

WATER is vital...



BADGER meters conserve it!

America now uses more than *7 billion gallons* of water per day . . . making conservation of supply almost as vital as the water itself. That's one reason Badger meters are used in thousands of communities throughout the nation. Badger meters measure water precisely . . . are made for every kind of water measuring job . . . provide an accurate check of water usage and water waste. And the Badger meter record of performance is unsurpassed . . . has caused waterworks men everywhere to agree — "It pays to install Badger meters!"

BADGER WATER METERS

BADGER METER MFG. CO., Milwaukee 45, Wisconsin

"Measuring the water of the world"

BOARD OF PUBLIC AFFAIRS
MILLERSBURG, OHIO

June 24, 1953

Simplex Valve & Meter Co.
Philadelphia 42, Pa.

Gentlemen:

We have acquired a Simplex Venturi main line meter from the City of Wooster, Ohio. This meter was sold to City of Wooster on May 4, 1912.

We plan to install this meter on our main line at Millersburg, Ohio Water Plant. Will you please send me descriptive information and parts list for this meter.

Markings on identification plate are as follows:
8" Tube 4" Throat #8-43-548-G.D. MSD 38.187
May 4, 1912 Markings on Cover Plate #546

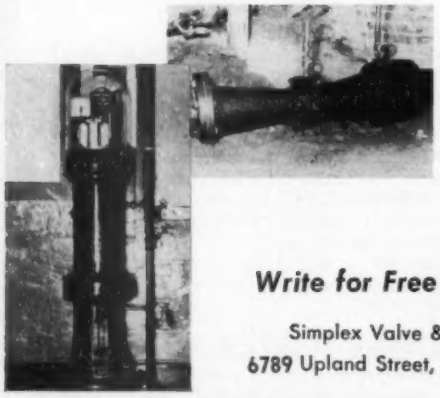
Address reply to: C. R. Deitrich, Supt. of W.W.

Respectfully,

C. R. Deitrich

C. R. Deitrich

Another proof that Simplex is reliable in the long run!



Simplex Meter and Venturi Tube recently installed after service of over 40 years!

Write for Free Bulletin No. 500

Simplex Valve & Meter Company,
6789 Upland Street, Philadelphia 42, Penna.

SIMPLEX®

VALVE AND METER COMPANY

Catalogs for You

Write directly to the manufacturers or use coupon on page 27

Choosing A Snow Plow Control

975 Points to consider before choosing an efficient snow-plow control include: amount of manpower required, plowing efficiency, the speed of raising and lowering the blade, and how well the blade will wear. A good control with which to begin your study is the Snowlift Conversion Kit, quickly installed on truck or tractor-plow. This installation is reported to save an average of $100 per plow, per season, in time, manpower and blade replacements. Write NATIONAL LIFT CO., SUBS. GAR WOOD INDUSTRIES, INC., CUSTOMER SERVICE DEPT., 36203 MAIN ST., WAYNE, MICH.

Sewage Treatment Plants Get Distributor Data

976 If you're interested in sewage treatment, this new booklet detailing the application of sewage to high- and standard-rate trickling filters should come in handy. Designated *Bulletin No. 6300*, it discusses the various types, sizes and capacities in which Dorrco Distributors are constructed; outlines their operating features, and illustrates many mechanical details. Copies will be sent by THE DORR CO., BARRY PL., STAMFORD, CONN.

Water-Tight Seal for Concrete Constructions

977 An addition to the Labyrinth line of water stops for use in concrete construction is announced by WATER SEALS, INC., 400 W. MADISON ST., CHICAGO 6, ILL. The new 3-rib size is designed for intermediate walls, slabs, and footings. The company also makes a 2-rib waterstop for light construction. and a 4-rib size for heavy pours. Each is easy to handle and produces a permanent water-tight seal.

Effective Insect Control

978 A shade tree sprayer that delivers 8,000 cu. ft. of air per minute at 150 miles per hour, operating through a 10-in. air outlet, is offered by THE HARDIE MFG. CO., HUDSON, MICH. The Model L80 Aero Mist will kill mosquitoes at 1,000 feet. Leaf-eating insects, too, are demolished, reducing spray costs by as much at 54%. The Aero Mist is powered by a 42-hp engine and equipped with a high-pressure pump and 53-gallon steel tank. A smaller unit, the Model L60, delivers 4,000 cu. ft. of air per minute and has full circle coverage.

Made-to-Order Sewer Equipment

979 One of the many municipalities to invest in Flexible sewer-rod equipment, the City of Chicago, recently acquired 14 special-type bucket machines. These units were made-to-order, and incorporate height extensions that permit the load to be emptied directly into the dump truck. The FLEXIBLE SALES CORP., 3786 DURANGO AVE., LOS ANGELES 34, CALIF., will design its sewer equipment to fill your community's requirements.

Everything for the Playground

980 General information on Burke playground equipment is contained in *Catalog K*, available on request from THE J. E. BURKE CO., FOND DU LAC, WIS. Heavy-duty, standard, and junior swing sets are described, along with slides, a merry-go-round, and various see-saws.

If your city needs maps, here's why engineers say

"It pays to talk to AERO!"

Here are six reasons why American cities call on AERO's engineers for help with their mapping problems:

1. Savings of 50% or more, over cost of ground surveys.
2. Deliveries months ahead of ground surveys.
3. No need for you to hire more men, in today's tough market, to do the mapping job.
4. Your own busy staff is not tied up on the mapping job.
5. AERO maps help provide office solutions for many problems which could be answered before only in the field.
6. Complete, up-to-date, dependable maps for your entire city are at hand for your broad planning and engineering development.

The speed, accuracy and economy of AERO mapping come as good news for many city administrators. Let our photogrammetric engineers discuss your city's mapping problems with you.

AERO SERVICE CORPORATION
236 EAST COURTLAND ST., PHILADELPHIA 20, PA.
Oldest Flying Corporation in the World

. . . MAKE MORE PROFIT ON JOBS LIKE THIS WITH
BLAW-KNOX CURB AND GUTTER FORMS

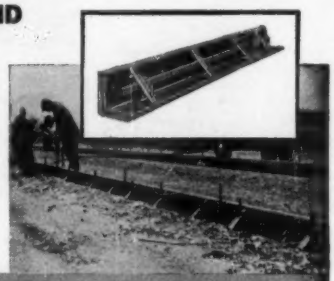
WHATEVER kind of street paving work you have, from curved or serpentine shapes to simple straight work, Blaw-Knox Steel Curb and Gutter Forms make money on every job. Easy to set and strip, they complete the job faster and well within your estimate. Costly hand finishing is eliminated. You not only save on materials and carpentry labor, but finished jobs have a perfection impossible to achieve with wood forms. The same forms can be used over and over for a wide variety of work. Ask your Blaw-Knox distributor about the "Complete Package" of Steel Forms for low-cost construction of concrete curb, curb and gutter, integral curb and sidewalk.

BLAW-KNOX

BLAW-KNOX COMPANY
BLAW-KNOX EQUIPMENT DIVISION
Farmer's Bank Bldg., Pittsburgh 22, Pa.

BLAW-KNOX ROAD AND AIRPORT FORMS

You can be sure of more rapid form setting, *always true to line and grade,* with Blaw-Knox Heavy-Duty, Self-Aligning Steel Forms. Available in heights of 8" or more, or in Dreadnaught Forms when less than 8" height is required. Heavy-Duty 12" x12" Forms and Airport Paving Forms in sizes above 12" are designed especially to meet the thicker paving slab requirements of modern airports.



ASK ABOUT THE BLAW-KNOX "Complete Package" OF CONCRETE PAVING AND READY-MIX EQUIPMENT

NEW TYPE EASTERN "A" STANDARD

The most effective warning sign for work areas. Wide base red angle-iron frame won't blow over. Yellow free-swinging sign, black lettering on both sides. Choice of eight standard legends, also reflectorized.

Portable unit stands 27-in. high by 18½-in. wide; folds and locks 18-in. x 18-in. sign in place; flags removable; weighs only 13 lbs.

All Eastern Metal traffic signs are official designs as specified by the Department of Commerce, Bureau of Roads—new legible lettering, heavy-gauge steel and durable flexible baked enamel. Prompt delivery and economical price.

Send for illustrated folder and price list.

INDUSTRIAL • SAFETY
EM SIGNS
UTILITY • TRAFFIC

EASTERN METAL
of Elmira, Inc., Elmira Heights 1, N. Y.

The NEW IMPROVED NETCO CATCH BASIN CLEANER
WITH PNEUMATIC CONTROLS

A Necessity For Every Municipality

Easily mounted on any short wheel base truck with 8 ft. in back of the cab, the Netco can be operated continuously, averaging 20 to 30 catch basins a day. The Netco with its two powerful pneumatic buckets (orange peel or clamshell) is simple to operate, has a hoisting capacity up to 1500 lbs., and easily removes all debris through openings as small as 16 inches. *Send for our six-page descriptive folder.*

NETCO DIVISION
CLARK-WILCOX COMPANY
118 Western Avenue
Boston 34, Massachusetts

LOOK JOE! SAW SMOOTH — STRAIGHT OPENINGS for PATCHES & TRENCHES with a . . .

SAVE TIME — MATERIAL — MONEY by "SAWING BEFORE BREAKING" with a . . .

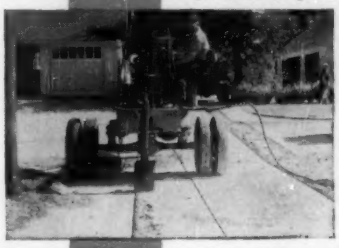
Clipper CONSAW

Save up to 50% in labor and material. Saw repair patches — water, gas, sewer and air line trenches in floors, streets, walks and highways. Save too, by sawing contraction joints in floors and highways . . . eliminate costly hand forming and spalling.

"4 OUT OF 5" BUY CLIPPER CONCRETE SAWS. Three-Point Suspension (see below) . . . the Patented Water Application which increases blade life and speed . . . perfect balance and dashboard controls for operating ease and maneuverability — these are the reasons WHY — "4 OUT OF 5" Buy Clipper!

Only minimum replacement material needed and is poured to straight, smooth edges.

Joe! Stop excessive breakout and high cost



Sawed lines confine breakout fracturing and speeds removal up to 50%.

Joe! Stop radial fracturing and excessive costs

Contraction joints in floors or streets eliminates spalling, 50% less seal and are maintenance-free.

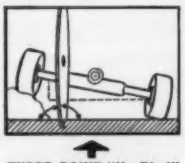
Joe! End slow, costly hand forming, spalling

NEARLY 20 YEARS EXPERIENCE
Sawing Concrete of All Types

The unqualified Clipper guarantee of satisfaction is backed by world-wide experience, the ability to select the finest materials and the "know-how" to put them together.

YOU CAN DEPEND ON CLIPPER SUPERIOR DIAMOND BLADES

. . . guaranteed to . . . "Provide the fastest cut . . . at the lowest cost." Clipper alone can supply every necessary metal bond . . . in over 36 specifications.



THREE POINT "No-Bind" SUSPENSION

Three Point Suspension holds the blade straight and true in the cut — **eliminates** binding — drifting — sidewear and friction. Guarantees the **longest possible** blade life!

CLIPPER MASONRY SAW

. . . the ONLY saw in the world that will cut masonry materials of every size and description. Clipper outperforms them all for ONLY Clipper is "CONVERTIBLE" and has the Patented Features for **flexibility.** A Clipper Model to fit any job—any budget. Sold on FREE TRIAL . . . Priced from $265.

MODEL HD
15 MODELS
PRICED FROM $265

FREE TRIAL!

ORDER TODAY . . . on FREE TRIAL. Discover for yourself how Clipper will increase your profits by increasing your production at reduced costs. Clipper "ON THE JOB" FREE TRIAL guarantees satisfaction at *no obligation.*

THERE'S A CLIPPER FACTORY BRANCH NEAR YOU

SAME DAY SERVICE FROM YOUR NEAREST FACTORY BRANCH—

Clipper

KANSAS CITY 8, MISSOURI

COAST TO COAST

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- ST. PAUL
- INDIANAPOLIS
- NEW YORK
- PITTSBURGH
- DENVER
- SAN FRANCISCO
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SOLD ONLY DIRECT FROM FACTORY BRANCHES

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CLIPPER MANUFACTURING CO.
2813 S.W. WARWICK KANSAS CITY 8, Mo.
Send FREE Literature

☐ CLIPPER CONSAWS ☐ CONSAW DEMONSTRATION
☐ CLIPPER MASONRY SAWS ☐ CLIPPER DIAMOND BLADES
No. 13-C

COMPANY_____
ADDRESS_____
CITY_____ STATE_____

NEW FWD FOURMASTERS

with MATH • MATIC DESIGN

FOR MORE TRUCK SERVICE PER TAX DOLLAR, it's the new FWD FOURMASTER with exclusive Math-Matic Design! This significant FWD engineering achievement *puts the power where there's work to be done* by properly proportioning torque to weight between front and rear axles.

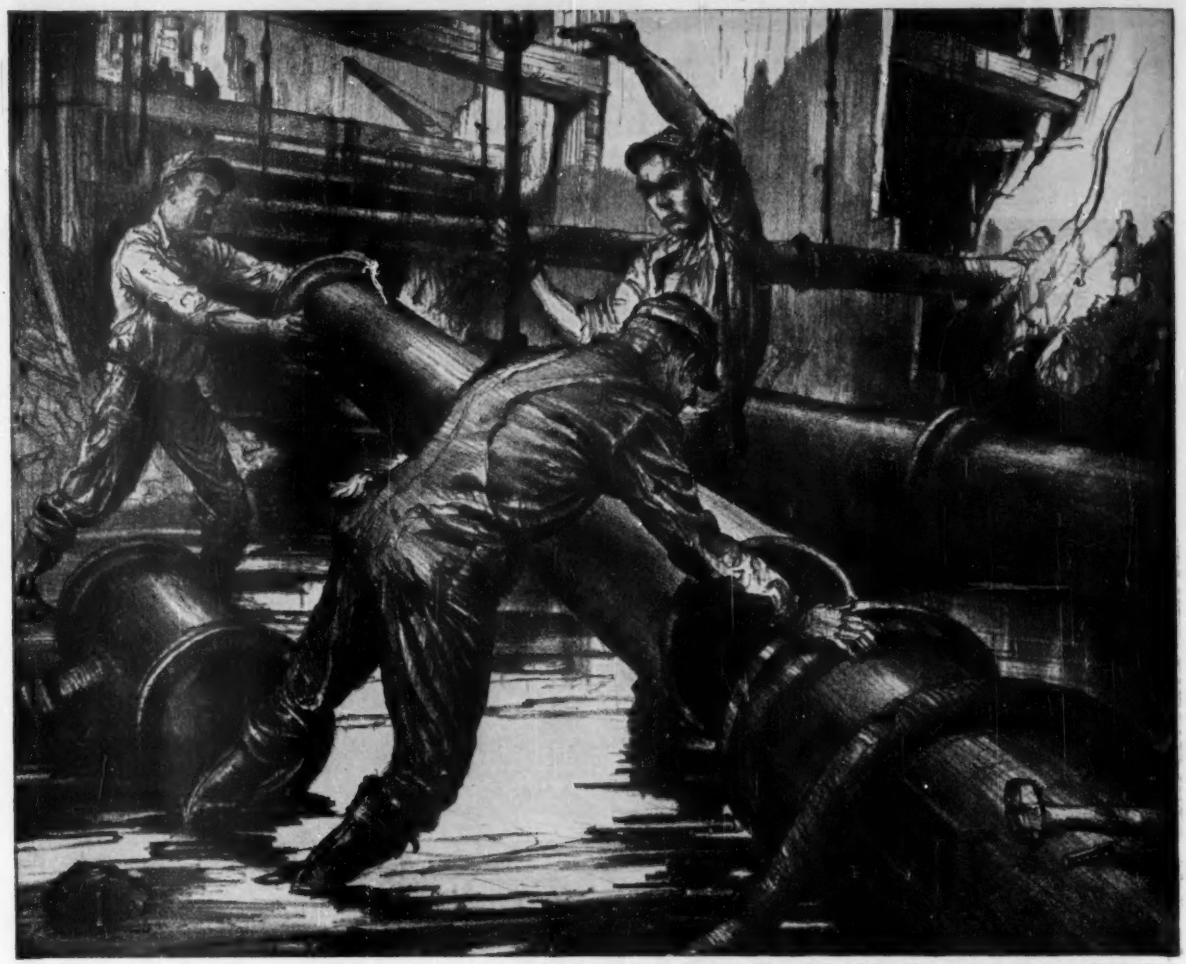
Up to 37% longer tire life—up to 82% greater tractive ability than rear-wheel-drive vehicles at essentially the same fuel consumption* . . . these are dollar and *sense* reasons for enthusiastic preference by highway officials everywhere! THE FOUR WHEEL DRIVE AUTO CO., CLINTONVILLE, WIS., *Canadian Factory* KITCHENER, ONT.

FUNCTION-ALL STYLING, one of 20 big, new FWD FOURMASTER features, makes mounting of snowplows, underbody blades and other equipment quick and easy!

* **TRUCK RESEARCH PROJECT** *conclusions. For detailed data on 7 years' research conducted by the University of Wisconsin's College of Engineering, write now for your* free copy of *"The Truck That Went to College."*

FWD

MATH • MATIC DESIGN



Lithographed on stone for U. S. Pipe and Foundry Co. by John A. Noble, A. N. A.

CAST IRON PIPE is a versatile pipe. It has age-old and outstanding service records in water, gas and sewerage fields.

Today's U. S. cast iron pipe centrifugally cast in metal molds combines the long life characteristics of the older type of pipe with all the advantages gained through the use of a modern manufacturing process and rigid quality controls.

Whether your requirements call for centrifugally cast iron pipe in sizes 2- to 24-inch, pit cast pipe in the larger sizes or fittings—all with various types of joints and in accordance with standard specifications—we are in an excellent position to meet them promptly from our five strategically located plants.

U.S.
cast iron
PIPE
FOR WATER, GAS, SEWERAGE AND INDUSTRIAL SERVICE

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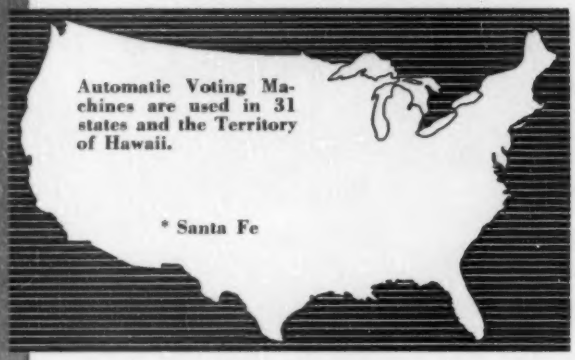
General Office, 3300 First Ave., N. • Birmingham 2, Ala.
Plants and Sales Offices Throughout the U. S. A.

11th in a series.

SANTA FE, NEW MEXICO VOTERS LIKE THEIR AUTOMATIC VOTING MACHINES



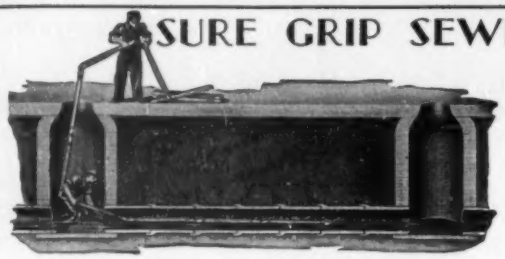
"The Board of County Commissioners rate kudos for their action yesterday in contracting for 35 additional voting machines . . . Six machines were used in the 1952 General Election, and proved their worth."

Editorial Comment—
Santa Fe New Mexican, June 3, 1953

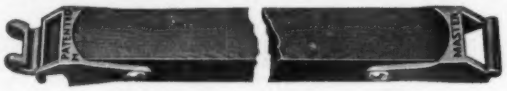
* Santa Fe uses 41 Automatic Voting Machines

AUTOMATIC VOTING MACHINE CORP.
JAMESTOWN, NEW YORK

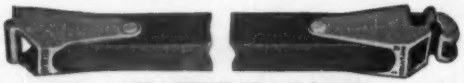
SURE GRIP SEWER RODS and ACCESSORIES



are joined together with a dual lock forming a rigid chain that will float. They can be coupled or uncoupled upon the street if desired. Made in two sizes.



The MASTER, a heavy duty rod,
Fir stock 1½ x 1½ inch square.



The REGULAR, a light rod,
Fir stock 1¼ x 1¼ inch square.

Write for catalog on complete line of sewer cleaning equipment.

EXPANDING SEWER MACHINE CO.
NAPPANEE, IND.

Is Your City Up-to-Date in Its Operation Methods?

THE AMERICAN CITY
470 Fourth Ave., New York 16, N. Y.

Please send me ..... copy (copies) of your Municipal Official's Handbook (Price per copy is $3.00)

A check covering this order is enclosed ..... Please bill me ..... (Check one)

Name .....

City or Company .....

Address .....

City..... Zone..... State.....

A good way to find out is to read about the practical experience of other city officials who have problems like yours. This experience is described in the "Municipal Official's Handbook" by William S. Foster, Engineering Editor of *The American City*. The latest methods on street construction and maintenance, snow removal, street cleaning, and refuse collection and disposal are explained in detail. Write us today for your copy.

NEW

15-WATT {6/12 VOLT / 25-50 MC} 2-WAY RADIO

MC 2
Receiver-Transmitter ES-22

- ✓ Compact, *single-package* design for installation convenience!
- ✓ Versatile 6/12 volt operation!
- ✓ Low transmit and standby battery drain!
- ✓ Delivers the most for your communication dollar!
- ✓ Optional front mount control unit available!
- ✓ Converts quickly . . . inexpensively to narrow band use!
- ✓ The exact sensitivity . . . selectivity you need!

ONCE AGAIN General Electric meets your exact communication equipment requirements! The evident waste in using more powerful 30 or 60 watt units where they are not needed is banished by this latest G-E receiver-transmitter design. It incorporates all the operating and convenience features you prefer. Here is the true economy set that rounds out your General Electric communication system . . . famous nation-wide for finest performance . . . lowest maintenance costs!

YOUR CAS* MAN will demonstrate this mobile unit . . . supply you with complete information on its uses. Call him today at our local General Electric office or mail the coupon at right.

**Communication Advisory Service*

GENERAL ELECTRIC

General Electric Company, Section 1014
Electronics Park, Syracuse, N. Y.

Please send me complete details of this new 15-Watt Low Band Communication Equipment.

NAME.....

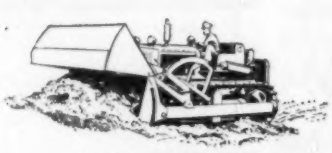
COMPANY.....TITLE.....

ADDRESS.....

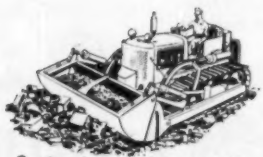
CITY.....STATE.....

U.S. 52

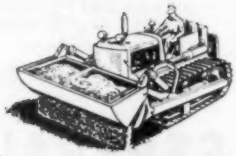
REFUSE IS SPREAD and compacted by an INTERNATIONAL TD-14A and Drott Bullclam at the Minot, North Dakota, sanitary landfill site.



1. Prepares the site



2. Crushes and compacts refuse



3. Transports and spreads earth cover

May Go Here

Sanitary Landfill Builds Highway Right of Way for Minot, North Dakota

They're using rubbish to build the right of way for possible relocation of U. S. Highway 52 at Minot, North Dakota. And they've eliminated all complaints about old-fashioned, open dump refuse disposal at the same time.

"We didn't know what a kind word was until we put an INTERNATIONAL-*Drott Bullclam to work for us,"* states Vern Fahy, Director of Public Works for the City of Minot.

"But we've had nothing but compliments since we started.

"No more rats, odors, smoke or fires. And we're dumping nearly 175 tons of refuse and ashes at our fillsite every working day.

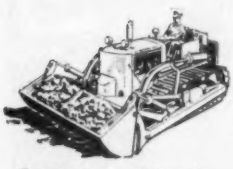
"We're getting two jobs done for the price of one with the INTERNATIONAL-*Drott Bullclam on our sanitary landfill project.*

"I'm sold on this method of sanitary landfill. It just can't be beat."

The INTERNATIONAL Crawler with matched Drott Bullclam—the "one-man sanitation squad"—is specifically designed for sanitary landfill work. For details on this modern method of refuse disposal and the best equipment for the job, check your INTERNATIONAL Industrial Power distributor.

Or write to:

DROTT MANUFACTURING COMPANY, MILWAUKEE 8, WISCONSIN
INTERNATIONAL HARVESTER COMPANY, CHICAGO 1, ILLINOIS



4. Grades and levels finished area.

BULLCLAM BY DROTT

POWER BY INTERNATIONAL

POWER THAT PAYS

NO RAMMING OR JAMMING! NO SPINNING OF WHEELS WHEN LOADING BULKY OR "PACKED" MATERIALS

LESSMANN LOADALL

DIGS IN WHILE STANDING STILL!

Check These Features!

- **STANDARDIZED PARTS.** Ford, Timken, Vickers, Bendix, etc., assure highest quality components and low-cost servicing.
- **SAFETY.** Operator has unrestricted visibility and is protected from loader arms.
- **EASY HANDLING.** Full reverse shifting gives LOAdALL four speeds forward and four reverse. Three simple, conveniently located hydraulic controls assure efficiency.
- **LOW COST.** You save on first cost, operating costs and maintenance costs with a LOAdALL.
- **LOAdALL BUCKETS.** Available with capacities of ⅜, ¾, ⅞, 1, 1¼ and 1½ yards.

A HIGHLY MANEUVERABLE POWER SHOVEL

Lessmann LOAdALL scoops up big loads of the most heavily compacted soils, cinders, aggregate, etc. . . . does it in 5 seconds while standing still! Extra hydraulic cylinders supply Hydraulic Power Crowd. This means *loading* with hydraulics which eliminates ramming and spinning of wheels . . . *minimizes repairs, reduces maintenance!* Dozer blade is easily attached for grading, backfilling. Crane-hook, lift forks, snow and trash buckets are also available.

9 FT. DUMPING CLEARANCE

LOAdALL has clearance for the highest trucks, bins and mixing hoppers. It loads or unloads at any height from 12″ below wheel level to 108″ above. Wheelbase of 73″ and 12′ turning radius make it highly maneuverable.

52″ REACH

Here's a full 4′4″ reach at maximum clearance! LOAdALL carries load close but quickly boosts it *'way out ahead* for easier loading . . . another advantage of Hydraulic Power Crowd.

HYDRAULIC POWER-CROWD

LESSMANN MANUFACTURING COMPANY

Affiliate of United Steel Barrel Co., Philadelphia—Wilmington, Del.

2008 Easton Blvd., Des Monies 4, Iowa

Write for Complete Information TODAY!

PORCELAIN ENAMEL

HOUSE NUMBERS

4 6 5

and Aluminum Number Holders

These 2″ x 3″ house numbers have the figures in black against a white background. Can be used with or without holders as each number has holes for mounting.

Holders which are available for two or more numbers are made from aluminum.

Numbers are quickly inserted into the holder and a tab which is easily turned up holds the numbers securely in position.

Write for quantity prices.

STANDARD SIGNS, INC.

3199 EAST 65th ST., CLEVELAND 27, OHIO

LETTER YOUR ROLLING EQUIPMENT

with our New Improved TRUCKSIGN TRANSFERS

- GREATER ECONOMY
- DURABILITY
- SIMPLE APPLICATION
- BRILLIANCE OF COLORS
- NO TYING UP OF EQUIPMENT
- EXTRA LONG STORAGE

SEND US YOUR PROBLEM — OUR TECHNICAL ADVICE IS *FREE*

Ward's TRUCKSIGN TRANSFERS

8504 LYNDON AVE.
DETROIT 38, MICHIGAN

A DIVISION OF WARD'S NAME PLATES

"Undoubtedly the most significant development in the field of street and highway maintenance . . ."
—ENGINEERING NEWS-RECORD

THE NEW
BARBER-GREENE
Mixall MEETS THE NEED FOR ALL MAINTENANCE AND SMALL PAVING JOBS

The quotation at the top of this page is typical of impartial observers who have seen the new Barber-Greene MIXALL perform. There is widespread agreement among editors, road builders and government officials that the need for a machine capable of on-the-spot production of even the highest type hot mixes has been answered by the development of the MIXALL.

Primarily designed for "stitch in time" maintenance to prevent major break-ups of much needed roads, the MIXALL also opens the market for surfacing of sidewalks, driveways, parking lots, service stations, playgrounds and countless others.

Once you see the MIXALL perform, you'll quickly recognize the business-building possibilities it holds for you. See your Barber-Greene Distributor for the full story—or write for information.

Barber-Greene BG
Aurora, Illinois, U. S. A.

Study Shows:

Average Yearly Repair Bill $19.61 PER ROLLER

On 26 BUFFALO-SPRINGFIELD 3-Wheelers Used By Large Eastern State.

Repair bills (materials and labor) were carefully logged on each of the 26 Buffalo-Springfield 3-Wheel Rollers used on all types of highway construction and maintenance in a large Eastern state. One of these rollers was in constant use for 12 years. Its total repair bill *for the entire period was less than $200.* That's an average of $16.39 per year! Only 4 rollers averaged over $30 per year for repairs. (Highest was $45.26 per year.)

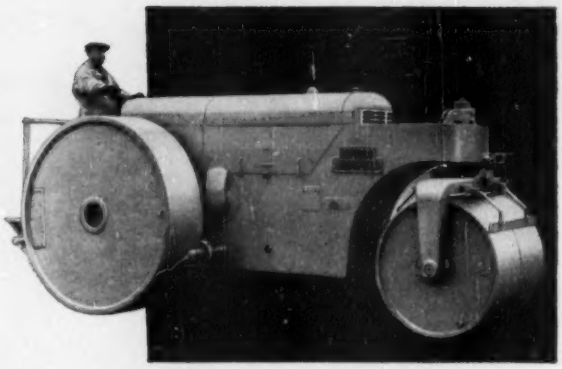
The average yearly repair bill for all 26 Buffalo-Springfield Rollers used was only $19.61 per roller.

However, savings in repair bills are only a small part of the story. A key piece of equipment that breaks down can hold up an *entire job*, can cost tremendous sums in lost job-time, lost man-hours.

That's why you pay a little more to have Buffalo-Springfield high quality and fine engineered design. One breakdown *that didn't happen* can more than offset the higher initial cost.

Judge for yourself! How much did you pay for repairs last year? More than $20 per roller? How much did down-time and lost man-hours cost you? How many jobs were delayed by equipment that failed? Study the record of these 26 Buffalo-Springfield Rollers and compare.

There's a Buffalo-Springfield Distributor conveniently located to serve you.



This is the Buffalo-Springfield 3-WHEEL ROLLER.

Heavy-duty engineered for continuous service on toughest jobs. Features that give you wide job versatility . . . Exclusive 4-speed transmission to provide a continuous range of roller speeds from 1.1 to 5.0 mph, all at full engine power. Machine-finished ballast-type rolls. High-speed, low-torque clutches for even, smooth reversing. Many more. Models for weights from 5 to 15 tons. Ask for Bulletin S-60-50.

Exact Repair Costs (Materials and Labor) for Each of the 26 Rollers:

ROLLER No.	YEARS ON THE JOB	TOTAL REPAIRS (MATERIAL & LABOR)	AVERAGE REPAIR COST PER YEAR
1	8	267.17	34.64
2	3	8.00	2.66
3	5	36.24	7.24
4	8	109.90	13.73
5	4	28.75	7.18
6	4	15.65	3.91
7	6	125.82	20.97
8	7	135.50	19.35
9	4	72.10	18.02
10	7	132.08	18.87
11	9	195.82	21.75
12	9	190.40	21.15
13	7	168.14	24.02
14	7	169.59	24.22
15	7	79.37	11.33
16	7	264.80	37.83
17	6	67.35	11.23
18	7	192.92	27.56
19	7	246.69	35.24
20	7	147.04	21.00
21	8	134.59	16.74
22	5	20.43	4.08
23	7	181.12	27.88
24	7	118.50	16.65
25	7	316.88	45.26
26	12	196.79	16.39
	175*		$509.90 or $19.61 per roller

* Average almost 7 years on the job per roller.

See your distributor for complete information or write —

Buffalo-Springfield Roller Co.
Springfield, Ohio

BUFFALO SPRINGFIELD
THE STANDARD OF COMPARISON
SPRINGFIELD, OHIO

THE LEADER IN ROAD ROLLER DESIGN AND MANUFACTURE.

Get these 7 ALL-NEW FEATURES with RCA UHF 2-Way Radio

1. Low-cost tubes.
2. Improved coverage in city areas. Less noise, less absorption of signal.
3. High-efficiency power supply.
4. Optional operation on as many as four frequencies.
5. Built-in metering sockets to speed service.
6. 6-inch antenna to simplify installation.
7. "Split" drawer design for easy maintenance.

NEW RCA UHF 2-WAY RADIO

opens up traffic-free channels

PERMITS "UNCROWDED OPERATION"

If you've been putting off 2-way radio . . . if you're now operating on an overloaded frequency . . . here's RCA 2-way radio equipment which utilizes many new uncongested channels in the Ultra High Frequency Band, 450-470 megacycles.

NOISE-FREE RECEPTION

With RCA 2-way radio, you eliminate most man-made and natural electrical noise, cut out ignition interference and assure top performance in severe noise areas.

PROVED IN ACTUAL FIELD USE

The UHF equipment, engineered to highest RCA standards, has proved its merit in actual field use in five important systems. The new RCA UHF equipment is ready now to help you solve your problem of channel overloading.

FOR NEW FREEDOM in radio operations check RCA Ultra High Frequency 2-way radio. MAIL COUPON NOW.

Radio Corporation of America
Communications Equipment, Dept. A4, Building 15-1, Camden, N.J.
In Canada: RCA Victor Company Limited, Montreal
Please send me information on RCA Ultra High Frequency (450-470 mc) 2-way radio.

NAME_____ TITLE_____

COMPANY_____

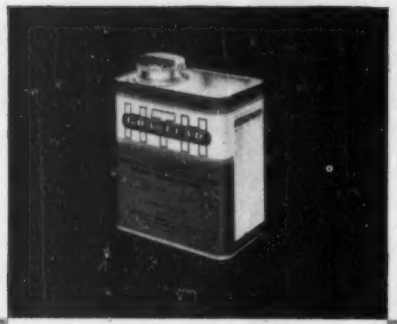
ADDRESS_____

CITY_____ ZONE____ STATE_____

RADIO CORPORATION of AMERICA
COMMUNICATIONS EQUIPMENT CAMDEN, N.J.

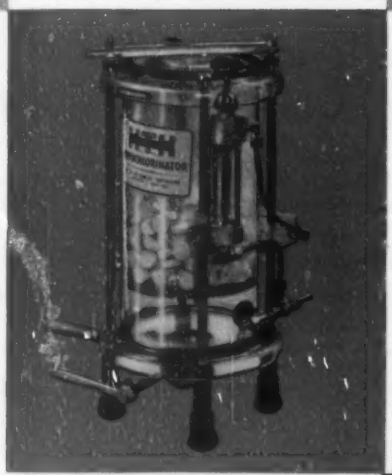
A DEPENDABLE SANITATION PROGRAM STARTS WITH HTH PRODUCTS

REG U S PAT OFF



HTH GRANULAR—For continuous chlorination, algae and slime control, and emergency chlorination, HTH Granular provides a convenient, economical source of chlorine. It has a record of proved performance over 25 years. HTH Granular contains 70% available chlorine; it is packaged in 100-lb. drums and in cases of nine 5-lb. cans.

HTH TABLETS—Containing 70% available chlorine, HTH Tablets dissolve slowly over a long period of time and provide a slow, steady source of available chlorine. They are ideally suited for hand feeding in such applications as sanitizing new water mains. HTH Tablets are packed in 100-lb. drums and in cases of six 7½-lb. cans.



HTH TABLET HYPOCHLORINATION—For accurate metering and feeding of hypochlorite solutions, HTH Tablets and the HTH Tablet Hypochlorinator provide a low-cost method that offers you new convenience and dependability. It is applicable to water, sewage, and industrial wastes treatment as well as to pool chlorination.

For complete information and descriptive literature call your Mathieson HTH distributor or write today.

MATHIESON

MATHIESON CHEMICAL CORPORATION
Mathieson Industrial Chemicals Division
Baltimore 3, Maryland

2147

STOP RUST! with RUST-OLEUM

From water tanks, fences, street lights, machinery and equipment, to water and sewage works plants —your rustable metal surfaces need **RUST-OLEUM'S** decorative protection. The **RUST-OLEUM** formula is *exclusive*—incorporating a specially processed fish oil vehicle that dries right, is odor-free, and penetrates rust to bare metal usually eliminating sand-blasting and other costly surface preparations. **RUST-OLEUM** is available in practically all colors including Aluminum, Blue, Yellow, Gray, Green, Black, Orange, Red and many others. It resists salt water, salt air, heat, sun, fumes, weathering smoke, etc. See Sweets for complete catalog and nearest source of supply, or write for complete information today.

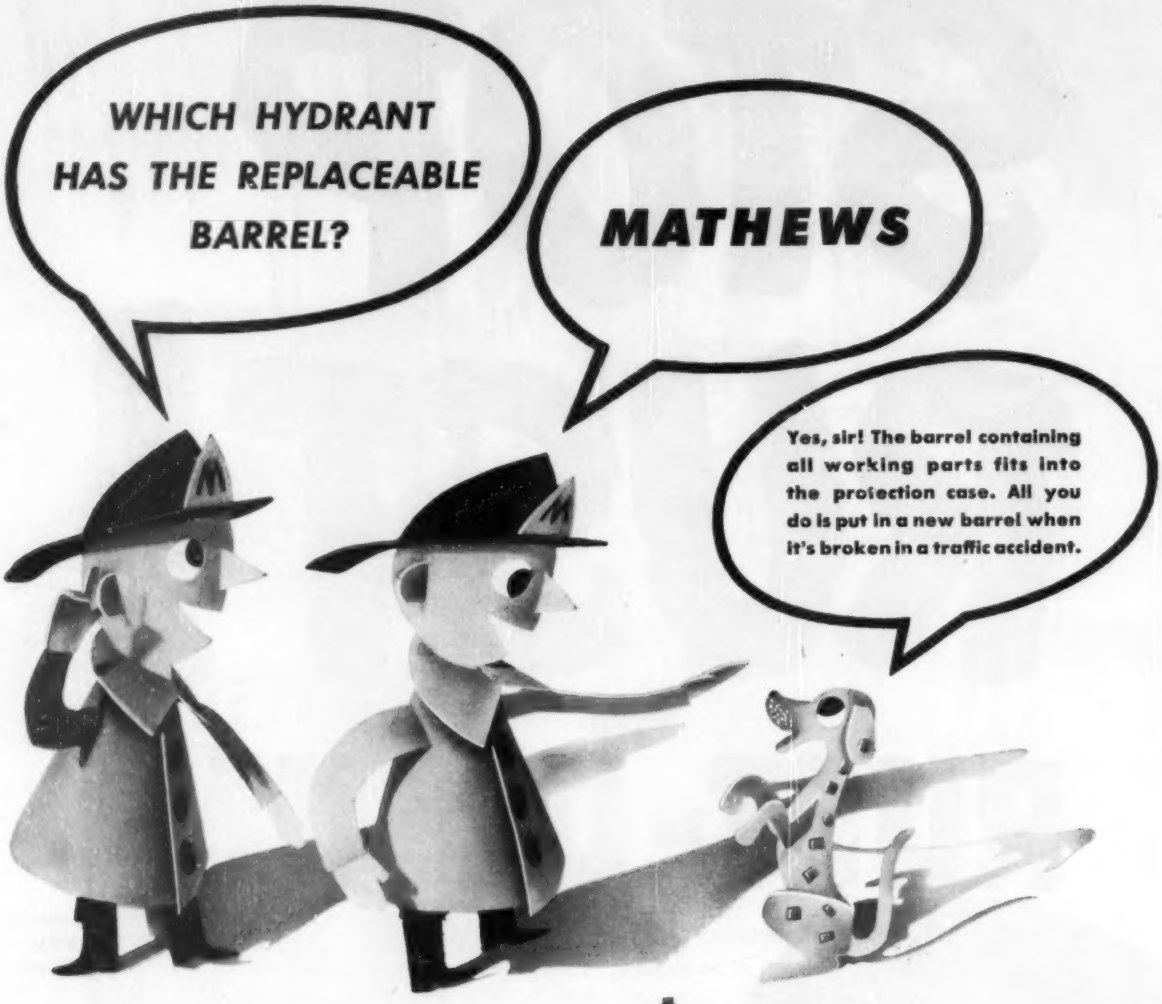
RUST-OLEUM BEAUTIFIES AS IT PROTECTS — AVAILABLE IN ALL COLORS, ALUMINUM AND WHITE

CHECK THESE USES: Tanks, fences, metal sash, parks, playground equipment, city trucks, roofs, stop lights, street lights, fire hydrants, pipes, schools, water and sewage works, parking meters, etc.

See local classified telephone directory under Rust Preventives or Paints for nearest RUST-OLEUM source of supply.

RUST-OLEUM CORPORATION
2511 Oakton St. • Evanston Ill.

- ☐ Have a Qualified Representative Call.
- ☐ Full Details on FREE Survey.
- ☐ Complete Literature.
- ☐ Nearest **RUST-OLEUM** Source.


WHICH HYDRANT HAS THE REPLACEABLE BARREL?
MATHEWS
Yes, sir! The barrel containing all working parts fits into the protection case. All you do is put in a new barrel when it's broken in a traffic accident.

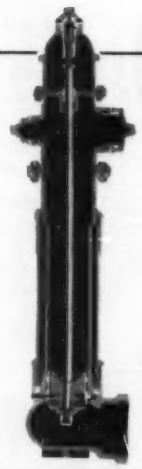
MATHEWS Means Fire Protection

LONG LIFE. Mathews Hydrants are protected at wear points by bronze bushings — corrosion and rust are thoroughly licked.

TROUBLE-FREE. The stuffing box plate, cast integral with the nozzle section, provides a positively leak-proof construction — water, sediment and ice cannot interfere with operating thread.

LOW-COST MAINTENANCE. Only one point requires lubrication — and that only during routine inspections.

REPLACEABILITY. A Mathews leveled in an accident can be replaced without excavating and in a jiffy. Community fire protection is interrupted only for a few minutes.



The Mathews includes every quality feature . . .

Compression type valve to prevent flooding • Head turns 360° simply by loosening bolts • Replaceable head • Nozzle sections easily changed • Protection case of "Sand-Spun" cast iron for strength, toughness, elasticity • A modern barrel makes an old Mathews good as new • Mechanical-joint pipe connections as needed

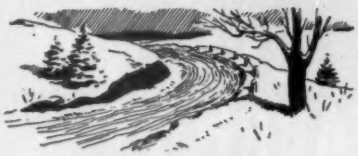
MATHEWS HYDRANTS

Made by R. D. Wood Company

Public Ledger Building, Independence Square, Philadelphia 5, Pa.

Manufacturers of "Sand-Spun" Pipe (centrifugally cast in sand molds) and R. D. Wood Gate Valves

STERLING ROCK SALT SOLVES WINTER'S TWO TOUGHEST TRAFFIC PROBLEMS



HEAVY SNOW

Straight Rock Salt converts normal snowfall into slush for traffic to whisk away. Keeps heavier falls "mealy" for quick and easy clean-up by plow.

ICE AND COMPACTED SNOW

Straight Rock Salt's greater melting power perforates and breaks up ice crust, loosening it from pavement, to be worked to the side by traffic or by one pass of the plow.

Handle Your Ice and Snow...

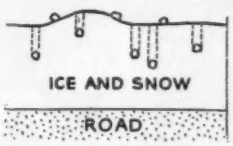
TEN TIMES FASTER AT HALF THE COST

Ten times faster! One truckload of STERLING *Auger-Action* ROCK SALT covers up to 15 miles per load. The same truck, with abrasives, will cover 1½ miles only. *Rock Salt actually does the whole job—and does it better —in one tenth the time.*

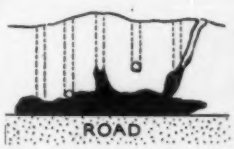
Half the cost! STERLING *Auger-Action* ROCK SALT is easier to store and handle. It spreads faster and goes further. Your own accounting will show the cost per mile for rock salt about *half* that of outmoded abrasive-chemical combinations.

WHY STERLING *AUGER-ACTION* ROCK SALT DOES THE JOB BETTER!

STERLING *Auger-Action* ROCK SALT can be used in any mechanical spreader. Requires no special handling or treatment.



Each salt crystal, generating its own heat, quickly bores straight down through the entire crust of snow or ice.



As crystals reach pavement, they become brine which flows laterally, breaking bond between ice and surface.

Broken ice is easily removed with one pass of the plow or scraper. Heavy traffic spots clear themselves by friction of passing vehicles.

ORDER NOW . . . IN CARLOADS, BULK OR 100 LB. BAGS

STERLING *AUGER-ACTION* ROCK SALT

International Salt Co., Inc., Scranton, Pa.

SALES OFFICES: Atlanta, Ga. • Chicago, Ill. • New Orleans, La. • Baltimore, Md. • Boston, Mass. • St. Louis, Mo. • Newark, N. J. • Buffalo, N. Y. • New York, N. Y. Cincinnati, O. • Cleveland, O. • Philadelphia, Pa. • Pittsburgh, Pa. • Richmond, Va. • ENGINEERING OFFICES: Atlanta, Ga. • Chicago, Ill. • Buffalo, N. Y.

Metcalf
UNIFORM
FABRICS
Standard fabrics for over eighty years
WHEN BUYING A UNIFORM... LOOK FOR THE TRADE-MARK ON THE BACK OF THE FABRIC
UNIFORM CLOTH
METCALF BROS. & CO. INC.
THIS SEAL IS YOUR GUARANTEE OF UNIFORMITY IN COLOR AND SERVICE.
SPECIFY
386
STANDARD SERGES FROM 12 TO 20 OZ.
STANDARD TROPICALS FOR SHIRTS
All in Premier 386 Quality
ALSO OVERCOATINGS
METCALF BROS. & CO., INC.
45 EAST 17th STREET, NEW YORK CITY
FOR UNIFORM SATISFACTION

End costly, outdated garbage-handling methods!

Youngstown Kitchens

FOOD WASTE DISPOSER

You can save money for your community and improve its standard of living, by urging installation of food waste disposers on a community-wide basis.

The Youngstown Kitchens Food Waste Disposer shreds food waste into minute particles . . . flushes them down the drain, through the sewer . . . the natural conveyer of waste.

Youngstown Kitchens Disposers eliminate need for garbage pails. Rats and flies are curbed; the welfare and economy of the community safeguarded.

Money spent for garbage collection is saved . . . can be channeled into other uses. Depending on the size of your community, the savings can run into thousands of dollars each year!

For complete information on advantages of community-wide elimination of garbage, plus information on costs, installation and supply, mail coupon today.

STEEL Youngstown Kitchens

EASY TO OPERATE

Turn on cold water.

Flick the handy switch to start smooth, trouble-free operation.

Scrape food waste into drain opening until it's all gone.

MULLINS MANUFACTURING CORPORATION
WARREN, OHIO
World's Largest Makers of Steel Kitchens

Mullins Manufacturing Corporation
Dept. AC-154
Warren, Ohio

Gentlemen:

Please send me all pertinent facts concerning community-wide garbage elimination, including costs, installation and supply.

NAME _____ TITLE _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

Masco

CONTROL AMPLIFIERS

For Efficient School and Institutional Operation

Reach any or all parts of your building with the flick of a switch. Make announcements...play music ...put on special programs...hold two-way conversations. There is a Masco Control Amplifier to fit your needs—from 6 to 60 stations. Available with built-in AM-FM radio and phonograph. All units have 28 watts of audio power, 40 watts peak power. Simple installation instructions furnished.

Entertainment

Emergencies

Paging

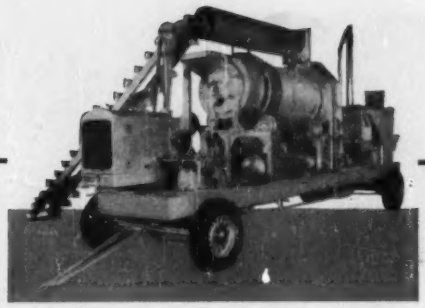
Inter-Communications

Write for Catalog No. 2253

Model MPS 40 for 40 stations. Complete with AM-FM radio and single speed manual phonograph.
List Price $675* Other models begin at $232.50*
*West of Rockies add 5% to above list prices.

MASCO SOUND EQUIPMENT

MARK SIMPSON MANUFACTURING CO., Inc.
32-28 49th Street, Long Island City 3, N.Y.



Cities Can Save On Street Repairs With White Portable Plants

These 8-10 tons per hour Asphalt Plants economically repair almost any pavement. Asphalt, brick, concrete, macadam, can be resurfaced or patched. Alleys, sidewalks, driveways can be paved.

Produce for immediate hot laying, or for deferred cold patches. Match any bituminous surface.

Mixes at plant, including labor, fuel, and overhead cost about $4 per ton, with $2 aggregate. Average 160 to 200 sq. yds., 1" thick per hour. Compare this with your present costs!

Also larger plants, 15 and 30 tons per hour.

Write for catalog and name of nearest dealer.

White Mfg. Co.

ELKHART 1 **INDIANA**

Nite-Bright

HIGHWAY SIGNS

"BRIGHT BY DAY— BRILLIANT BY NIGHT"

FOR THE BEST IN TRAFFIC SIGNS (heavy type)
ALUMINUM SIGNS REFLECTORIZED WITH SCOTCHLITE • EMBOSSED STEEL BAKED ENAMEL SIGNS
CHANNEL IRON SIGN POSTS IN STOCK
TRAFFIC CONES—IMMEDIATE SHIPMENT

See Our Listing in the 1953 Edition of The Municipal Index

Write Us for Complete Information

NITE-BRIGHT SIGN COMPANY
140 JAMES STREET, BRIDGEPORT 4, CONN.

WORTHINGTON-GAMON

LIQUID METERS
All Sizes All Types

WORTHINGTON-GAMON METER DIVISION
Worthington Corp.
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More for your microfilming dollar

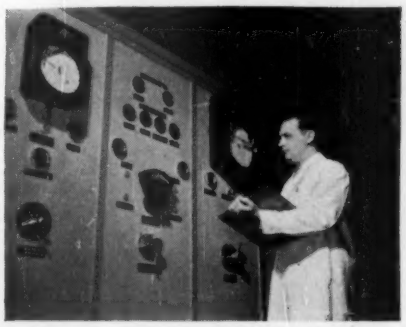
You're sure of these savings and advantages with Recordak

You're sure of getting a machine that's especially designed for your requirements . . . *one* that will give you all the advantages of modern microfilming at lowest cost.

This is possible because Recordak offers 6 different types of microfilmers, instead of one or two. And 4 types of Recordak Micro-File machines for copying larger documents. Thus, even the smallest users can realize savings—over and above all microfilming costs—which are proportionate to those of the largest ones. And, remember, you can buy or rent as you please.

You're sure that your Recordak Microfilmer is precision-built by Kodak to give you sharp, legible pictures of document after document . . . to prevent fogging, blurring, and overlapping of images . . . to compensate for operator failure . . . to minimize service requirements.

As you can well imagine the job of recording documents as tiny images on a strip of film is a most exacting one. And, here, Recordak's twenty-five years of experience and know-how are reflected in the economy and satisfaction of your operation.



You're sure that your films will be processed *the same day they are received at your Recordak Film Processing Station.* There are 26 of these stations, all told—*professional in every respect!* High speed, specially designed equipment is used exclusively . . . and skilled technicians supervise the job.

Every roll of film is processed to meet the specifications of the Bureau of Standards for archival films—then double-checked for photographic quality.

You're sure to profit, too, from the invaluable experience gained by Recordak Field Representatives in working with governmental agencies of every size and type. How are departments such as yours saving dollars every day with Recordak Microfilming? These specialists know. And they're always at your call . . . always ready to work with your staff in correlating Recordak Microfilming most effectively with your routines.

Call your local Recordak representative soon—you'll be under no obligation whatsoever. Or write Recordak Corporation (Subsidiary of Eastman Kodak Company), 444 Madison Avenue, New York 22, N. Y.

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RECORDAK

(Subsidiary of Eastman Kodak Company)

originator of modern microfilming — and its application to government routines

all
the
features
needed
for a
COMPLETE
sweep

AUSTIN-WESTERN MODEL "40" MOTOR SWEEPER

Austin-Western
Power Graders · Motor Sweepers
Road Rollers · Hydraulic Cranes

BALDWIN BLH LIMA-HAMILTON
Construction Equipment Division

Manufactured by
AUSTIN-WESTERN COMPANY
Subsidiary of Baldwin-Lima-Hamilton Corporation
AURORA, ILLINOIS, U.S.A.

MUELLER

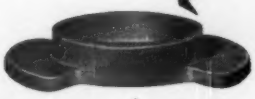
Improved Curb Box

• Cast iron lid screws onto large, steel upper section. Pentagon access plug screws into a bronze bushing which is fitted into lid. Assures easy removal of plug in all kinds of weather. 2" diameter upper section offers easy accommodation for large, heavy-duty shut-off rods.

• Steel upper section telescopes into bottom section. Prevents damage to curb box as well as curb stop when subjected to vehicle traffic. Can be furnished in varying lengths from 2' to 5'.

• Arch-type base extends well below curb stop and rests on foot pieces or rigid foundation.

• The H-10316 Curb Box, used with curb stops ½" through 1", and the H-10336 Curb Box, used with curb stops 1¼" through 2", have optional foot pieces which offer close fitting support for curb stops and centers them in the curb box.



Contact your Mueller representative or write direct for detailed information.

MUELLER CO.

Dependable Since 1857

MAIN OFFICE & FACTORY DECATUR, ILLINOIS

A SPECIAL ORDER *for* CHICAGO!

The City of Chicago recently required 14 special type bucket machines with "height extensions", allowing the load to be emptied directly into the dump truck. "Flexibles" was its choice. Pictured above are these "made-to-order" machines just prior to leaving the Flexible plant in Lima, Ohio. We have, or can "tailor", equipment required to meet your city's special needs. Write for FREE CATALOG.

Flexible SALES CORPORATION

3786 DURANGO AVE., LOS ANGELES 34, CALIF.
(DISTRIBUTORS IN PRINCIPAL CITIES)

AMERICA'S LARGEST MANUFACTURER OF PIPE CLEANING TOOLS AND EQUIPMENT

"CORNER OF THE WORLD"

In San Francisco, cable cars climb from the financial district to Nob Hill, cross Chinatown en route. San Francisco Bay Bridge threads across the background. Orient and Occident, East and West, meet here.

In many interesting locations you'll find ***FERRO*** signs . . . visible day or night; permanent porcelain enamel fused on finest steel.

On any street, road or highway, ***FERRO is the sign of good government.*** For full details, write:

FERRO ENAMELING CO.
1100 Fifty-Seventh Avenue Oakland 21, California

ANNOUNCING the NEW UNITED

ROUND TOP RECEPTACLE

R-1536

It Tops Them All!

BEAUTY...Best-looking waste receptacle of its kind ever made.
ONE-PIECE CONSTRUCTION...Outer shell electrically welded throughout of heavy gauge furniture steel.
SELF-CLOSING CHROME PLATED DOOR . . . Dependable action.
SANITARY WHITE heavy enamel finish baked on at high temperature. Also in special colors. BONDERIZED.
DURABILITY...Like other United receptacles it will set records for long service.
FEATHERWEIGHT LIGHTNESS... Finger-tips easily lift outer shell to expose galvanized steel inner container.

UNITED ®
Write for Catalog

UNITED METAL BOX CO., Inc.
172 Seventh St., Brooklyn 15, N.Y. SOuth 8-6700
West Coast Distributor: Shoreline Metals Co., Los Angeles, Calif.

DANGER! ICE AHEAD

. . . be ready for it this winter

with **BAUGHMAN**

the only complete line of

ICE CONTROL EQUIPMENT

A Complete Line For Every Budget

- Pull-Type or Truck-Mounted — Hydraulic, Mechanical or Traction Powered
- To Spread: Sand
- Cinders
- Salt
- Calcium Chloride
- Gravel
- Chips

featuring the sensational SPREAD-MOBILE with New Hydraulic Controls . . . "Center-Spred" Design

Spreads IN FRONT OF all four wheels for perfect traction, better visibility. All operations, including amount and width of spread, HYDRAULICALLY CONTROLLED from cab. Other exclusive Spread-Mobile features: EXHAUST HEATER, to prevent load freezing; SPLIT-BOTTOM DUMP for off-season dump-body uses; heavy-duty AUXILIARY GAS ENGINE for hydraulic system; streamlined SINGLE-WELD BODY. Write for Bulletin A-370-H.

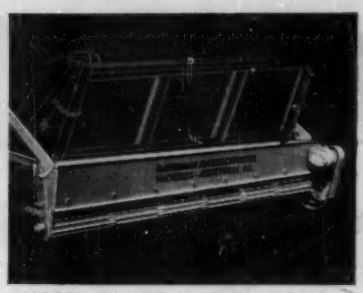
WRITE TODAY FOR FULL DETAILS ON MODELS YOU PREFER

New Model SC-52 PULL TYPE SPREADER

Popular low-cost traction powered type with improved lower distributor plate (only 13" above ground). Spreads in complete circle under wheels of truck. Write for Bulletin A-371.

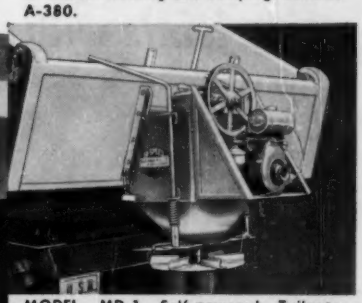
BAUGHMAN MANUFACTURING COMPANY

148 Shipman Road • Jerseyville, Illinois

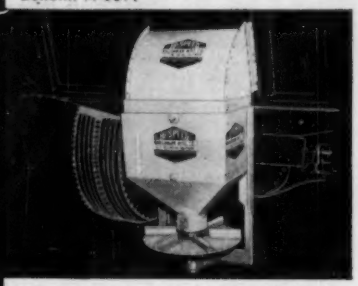


MODEL 51-HDC Hydraulic "Cinder Cracker" (Chain-drive MODEL 51-CDC similar). Bulletin A-354.

MODEL KMC-4. New Fifth Wheel design for positive spread control of sand, cinders, salt, etc. Drop-bottom adaptable to off-season hauling and dumping. Bulletin A-380.



MODEL MD-1 Self-powered Tailgate Spreader for dump truck ice control. Bulletin A-357.



MODEL HD-51 Hydraulic-driven Tailgate Spreader with cabcontrol. Bulletin A-353.

MODEL 51-SM "Salt Miser" scatters salt or chloride. Self-powered. Bulletin A-350.

ENDURING PROTECTION

as traffic rumbles on!

Reinforce all hard-to-get-at pipe joints with

CLOW

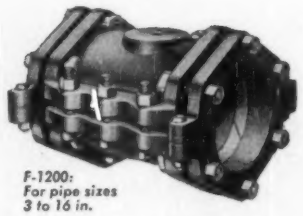
MECHANICAL JOINT

BELL SPLIT SLEEVES

F-1205:
For pipe sizes
3 to 16 in.

Under the constant impact of ponderous, ever-increasing rail and vehicular traffic on our highways and railways, crossing underground water pipe lines require added protection. That is why foresight is so important. *Play it safe*—don't wait for a break. Install Clow Mechanical Joint Bell Split Sleeves as *original equipment* wherever pipe must pass under highway truck routes and railroad tracks. Specify them for marshlands and under water—everywhere pipe is not readily accessible in case of an emergency. Clow Mechanical Joint Split Sleeves are easy to install—no lead, jute, or calking.

Write for illustrated circular containing full particulars and other pertinent information



F-1200:
For pipe sizes
3 to 16 in.

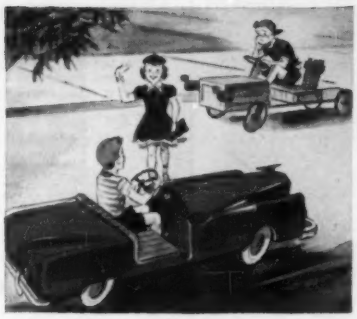
F-1200 Clow Mechanical Joint Straight Split Sleeves are ideal for permanent repairs to pipe barrels. 12-in. and smaller sizes will repair any lengthwise break up to 8 in.; 14- and 16-in. sizes, to 17 in.

JAMES B. CLOW & SONS
201-299 North Talman Avenue • Chicago 80, Illinois

and their National Cast Iron Pipe Division, Birmingham, Alabama
Subsidiaries: Eddy Valve Company, Waterford, N. Y.; Iowa Valve Company, Oskaloosa, Iowa

You can't compete if your equipment is obsolete!

With construction activity becoming more competitive, even in the face of high labor costs, it is more important than ever before to take a closer look at your operating costs . . . your dirt moving methods . . . your tools and equipment.



Obsolete methods and equipment take a heavy toll by slowing down output, increasing manhours and increasing repairs and maintenance. Efficient material handling equipment can make the difference between profit and loss on most any job . . . help insure that time and production schedules are met without resorting to expensive overtime and wasteful emergency practices.

If you are not using "PAYLOADER" Tractor-Shovels at present, it will pay you to investigate these fast, flexible, rubber-tired loaders that have proven so profitable for so many material producers and contractors, both large and small.

If you are already "PAYLOADER"-equipped, you'll be pleasantly surprised at the superior performance of the late model "PAYLOADERS". Although "PAYLOADERS" are built to give thousands of hours of dependable service, constant research and engineering improvements keep them out in front in design, construction and performance.

Now is the time to trade in obsolete equipment — to modernize your methods to meet present day conditions — to assure profitable operation in spite of closer competition. Your nearby "PAYLOADER" Distributor will gladly demonstrate any of the new models. The Frank G. Hough Co., 710 Sunnyside Ave., Libertyville, Ill.

PAYLOADER®
THE FRANK G. HOUGH CO. • Since 1920

with GOLDAK EQUIPMENT
you KNOW you get PPD*

PIN POINT DETECTION

MODEL 620
BOX & VALVE LOCATOR

Pin Point Detection of Goldak's Model 620, saves you time and money, with immediate location of Buffalo Boxes, Valves, Covers and Buried Metals.

Untiring operation, weighs only 8 lbs. Sturdily constructed, all-weather use. High quality parts assures maximum sensitivity, low operating and nominal replacement costs.

you get PPD* with Goldak Locators

*PIN POINT DETECTION

write for FREE literature and name of nearest dealer

The name GOLDAK, on electronic instruments, eliminates guesswork . . . your assurance of Pin Point Detection at all times, in any kind of weather. Throughout the world, with companies who need instruments that are accurate and durable, first choice is GOLDAK.

MODEL L46
SENIOR
LEAK DETECTOR

Detect costly leaks in water and low viscosity fuel lines, in their exact position. Completely portable, simple to operate. Latest electronic improvements and high quality parts, assures unequalled performance. Save time and labor, eliminate costly leakage with Goldak Model L46.

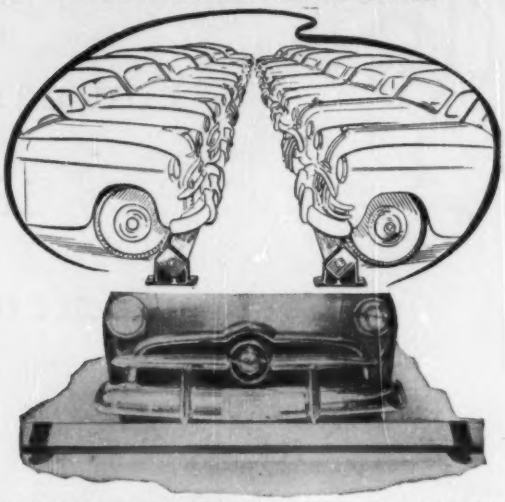
you get PPD* with Goldak Locators

*PIN POINT DETECTION

The GOLDAK Company
Leading Makers of PIPE LOCATORS
Since 1933

1544 W. GLENOAKS BLVD.
GLENDALE 1, CALIF.

IDEAL FOR "OFF THE STREET" PARKING
WITH OR WITHOUT PARKING METERS



SALIENT FEATURES OF HAR-BAR BARRIERS

1. High enough to stop your car.
2. Low enough to clear your bumper guards.
3. Barrier is above ground — no drainage problem.
4. Barrier is above ground — no rotting of wood.
5. Automatically spaces your cars.
6. Follows contour of your ground.
7. Easily installed — just line up and drive the anchor pins.
8. Easily moved — just pull the anchor pins.
9. Easy to clean under.
10. Easy to maintain.
11. Installed on any kind of surface — black top, cement, macadam, gravel or cinders.
12. It really dresses up your parking lot.
13. You always stop against your tire — no shock.
14. All Castings are aluminum — no rusting.

Send us a plot plan of your parking lot—we do the engineering free.

HARRIS - BARRIER INC. 5407 N. PENNSYLVANIA STREET INDIANAPOLIS 5 - INDIANA

For those who appreciate the finest . . .

Surrounded by charm and luxuries . . . 7 minutes from downtown. Superb food—unsurpassed service . . . dancing and delightful entertainment in the beautiful Zephyr Room. Bungalow suites adjacent to hotel.

Free Parking
Garage in Building
Telephone
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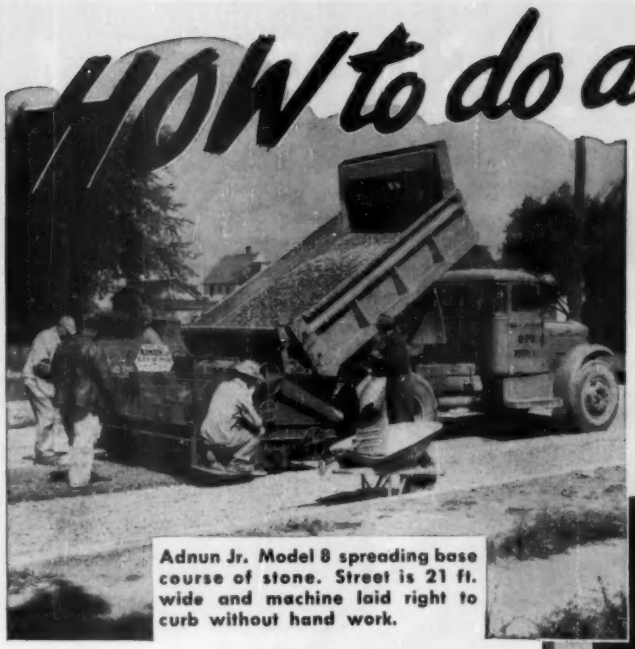
BELLERIVE
HOTEL
ARMOUR & WARWICK BLVD

KANSAS CITY, MO.

How to do a BETTER JOB of STREET PAVING



Adnun Jr. Model 8 spreading base course of stone. Street is 21 ft. wide and machine laid right to curb without hand work.

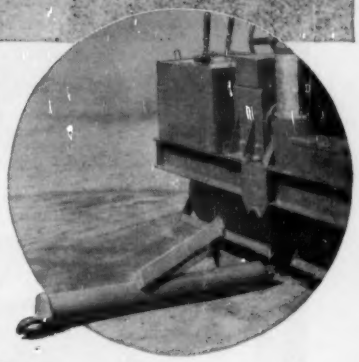
THE NEW ADNUN JR MODEL 8 BLACK TOP PAVER

HERE is a street job in New York State. The Adnun Jr. handled all of the spreading on this from stone base to finished top course. The Adnun Jr. is a highly engineered, quality, precision, tow-type paver that is far superior to the usual hopper on wheels now being used for non-specification work. The advantages of the Adnun Jr. assure greater accuracy in course thickness, improved density and better joints with a material reduction in hand work.

Its ability to maneuver without load saves time on relocations. The powered Breaker Bar in the Hopper assures better compaction. The Oscillating Toothed Cutter Bar, with overlapping action, cuts the course off at the right thickness without troweling fats to the surface and makes a tighter joint without hand work. A smooth course surface which approaches that of larger pavers, results from the Adnun principle of Continuous Course Correction.

These are only a part of the long list of Adnun Jr. advantages in performance and design. You should know all about them. Let us send you a folder on it today.

After stone course was shot with oil, Adnun Jr. laid the asphalt surface in two courses in 7 ft. suctions. The machine is here laying the binder.



The Adnun Jr. is easily moved. A removable Trailer Hitch permits lifting the unit with the truck body hoist and towing it anywhere with the paver rolling on its own front wheels.

ADNUN JR MODEL 8

BLACK TOP PAVER

BLAW-KNOX COMPANY
FOOTE CONSTRUCTION EQUIPMENT DIVISION
1904 State Street,
NUNDA, NEW YORK

BLAW-KNOX

THE MEMBERSHIP OF A C. I. P. Century Club

96%

OF ALL 6-INCH AND LARGER CAST IRON WATER MAINS EVER LAID IN 25 REPRESENTATIVE CITIES ARE STILL IN SERVICE.

Based on the findings of a survey conducted by leading water works engineers.

CAST IRON PIPE

DISTINGUISHED CLUB... now has 60 Members!

The Cast Iron Pipe Century Club is probably the most unusual club in the world. Membership is limited to municipal, or privately-owned, water and gas supply systems having cast iron mains in service for a century or more. Although the Club is formally constituted, there are no dues, no regular meetings, and no obligations other than to inform the Recording Secretary if and when the qualifying water or gas main is taken out of service, or, sold for re-use.

In spite of the unique requirement for membership, the Club roster grows, year by year, from 18 in 1947 to 60 in 1954. And why not, when a survey sponsored by three water works associations, indicates that 96% of all 6-inch and larger cast iron water mains ever laid in 25 representative cities are still in service. And when answers to a questionnaire, mailed to gas officials in 43 large cities, show that *original* cast iron mains are still in service in 29 of the cities.

If your records show a cast iron main in service, laid a century or more ago, the Club invites you to send for a handsome framed Certificate of Honorary Membership. Address Thomas F. Wolfe, Recording Secretary, Cast Iron Pipe Century Club, Peoples Gas Bldg., Chicago 3, Illinois.

CLUB ROSTER

DEPARTMENT OF WATER AND WATER SUPPLY
City of Albany, New York
NIAGARA MOHAWK POWER CORP. (GAS)
Albany, New York
ALEXANDRIA WATER COMPANY
Alexandria, Virginia
BUREAU OF WATER, DEPT. OF PUBLIC WORKS
Baltimore, Maryland
CONSOLIDATED GAS ELECTRIC LIGHT AND POWER CO
Baltimore, Maryland
PUBLIC WORKS DEPT., WATER DIVISION
Boston, Massachusetts
BOSTON CONSOLIDATED GAS CO.
Boston, Massachusetts
PUBLIC SERVICE ELECTRIC & GAS CO.
Bound Brook, N. J.
BRIDGEPORT GAS LIGHT COMPANY
Bridgeport, Conn.
DEPARTMENT OF PUBLIC WORKS, DIVISION OF WATER
Buffalo, New York
SOUTH CAROLINA ELECTRIC & GAS CO.
Charleston, S. C.
PEOPLES GAS LIGHT & COKE COMPANY
Chicago, Ill.
WATER WORKS DEPARTMENT
Chicago, Ill.
BOARD OF WATER COMMISSIONERS
Detroit, Michigan
MICHIGAN CONSOLIDATED GAS CO.
Detroit, Michigan
FALL RIVER GAS WORKS COMPANY
Fall River, Massachusetts
CITY OF FREDERICK WATER DEPT.
Frederick, Maryland
GAS DEPARTMENT
City of Fredericksburg, Virginia
PUBLIC SERVICE COMMISSION
City of Halifax, N. S., Public Water Supply
THE HARTFORD GAS COMPANY
Hartford, Connecticut
MUNICIPAL WATER WORKS
Huntsville, Alabama
BUREAU OF WATER
Lancaster, Pennsylvania
LOUISVILLE GAS & ELECTRIC CO.
Louisville, Kentucky
CITY OF LYNCHBURG WATER DEPARTMENT
Lynchburg, Virginia
NATURAL GAS SERVICE, INC.
Madison, Indiana
MOBILE GAS SERVICE CORP.
Mobile, Alabama
MOBILE WATER WORKS COMPANY
Mobile, Alabama
QUEBEC HYDRO-ELECTRIC COMMISSION
Montreal, Quebec
WATERWORKS DEPARTMENT
City of Nashville, Tennessee
PUBLIC SERVICE ELECTRIC & GAS CO.
New Brunswick, N. J.
NEW HAVEN GAS COMPANY
New Haven, Conn.
NEW ORLEANS PUBLIC SERVICE, INC. (gas)
New Orleans, Louisiana
PUBLIC SERVICE ELECTRIC & GAS COMPANY
Newark, New Jersey
DEPT. OF WATER, GAS & ELECTRICITY
New York, New York
PHILADELPHIA ELECTRIC CO., GAS DEPT.
Norristown, Pa.
CITY OF PAINESVILLE, GAS DIST. DEPT.
Painesville, Ohio
DEPT. OF PUBLIC WORKS, BUREAU OF WATER
Philadelphia, Pennsylvania
PHILADELPHIA GAS WORKS CO.
Philadelphia, Pennsylvania
BUREAU OF WATER, DEPT. OF PUBLIC WORKS
Pittsburgh, Pennsylvania
PLYMOUTH GAS LIGHT COMPANY
Plymouth, Mass.
POTTSVILLE WATER COMPANY
Pottsville, Pennsylvania
PROVIDENCE GAS COMPANY
Providence, Rhode Island
QUEBEC POWER COMPANY, GAS DIVISION
Quebec, Canada
BUREAU OF WATER
Reading, Pennsylvania
DEPT. OF PUBLIC UTILITIES (gas)
Richmond, Va.
DEPT. OF PUBLIC UTILITIES (water)
Richmond, Va.
ROCHESTER GAS & ELECTRIC CORP.
Rochester, N. Y.
WATER & SEWERAGE DEPARTMENT
City of Saint John, N. B.
DEPT. OF PUBLIC UTILITIES, WATER DIVISION
St. Louis, Missouri
SALEM GAS LIGHT COMPANY
Salem, Mass.
WATER DIVISION, Dept. of Engineering
Syracuse, New York
THE CONSUMER'S GAS CO. OF TORONTO
Toronto, Ontario
DEPT. OF PUBLIC WORKS
Troy, New York
CITY OF UTICA, BOARD OF WATER SUPPLY
Utica, New York
CITY OF WHEELING WATER DEPT.
Wheeling, West Virginia
WILMINGTON WATER DEPT.
Wilmington, Delaware
WATER DEPARTMENT
City of Winchester, Virginia
WATER DEPARTMENT
City of Winston-Salem, North Carolina
YORK WATER COMPANY
York, Pennsylvania
WATER DEPARTMENT
City of Zanesville, Ohio

SERVES FOR CENTURIES

Help for Communities in planning... and on the job

NEW construction techniques have made constantly increasing demands for the right kind of machinery. Today, communities need modern equipment in order to plan and complete projects efficiently and economically.

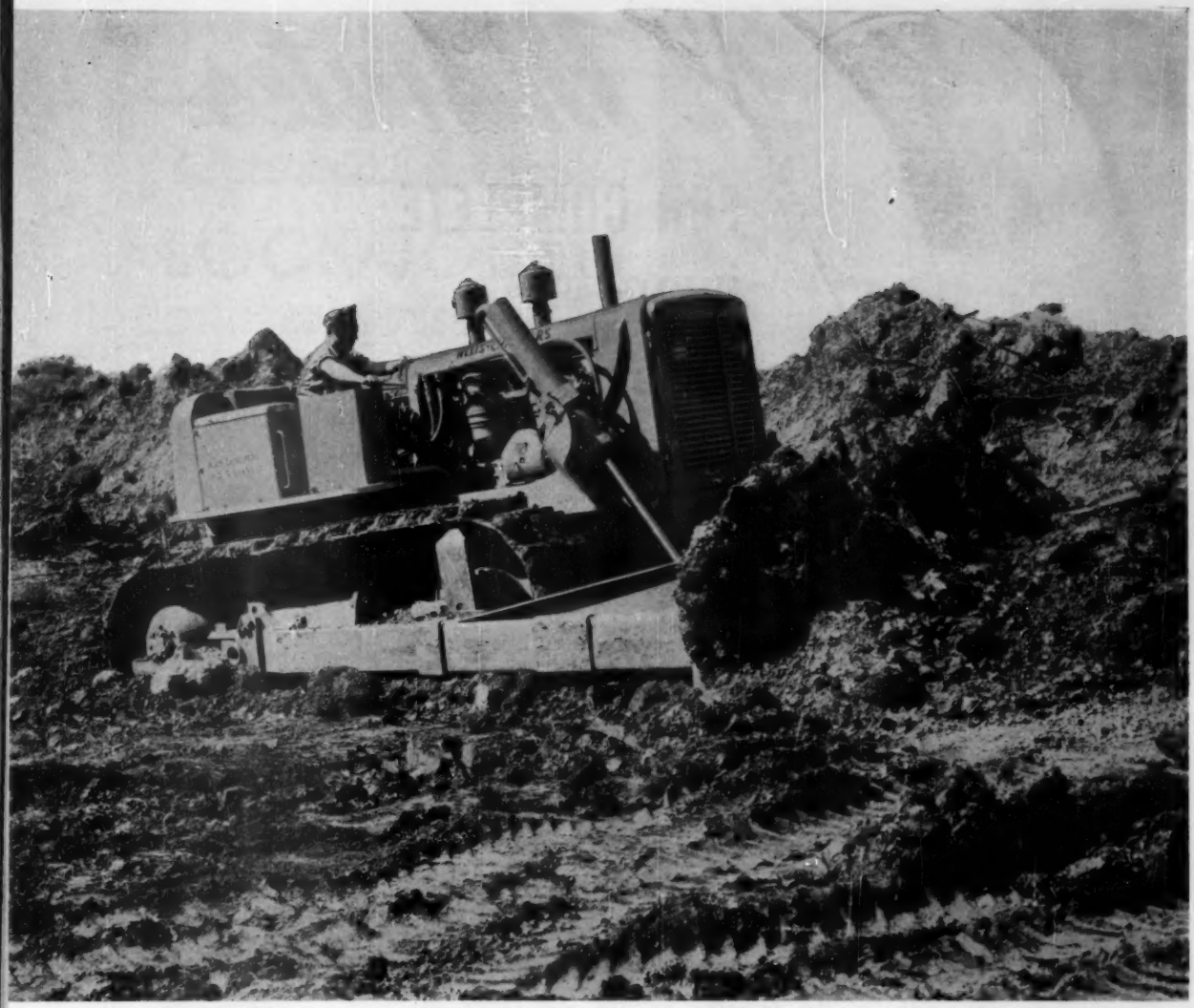
In an effort to cooperate fully and to meet these demands, Allis-Chalmers offers completely new designs like the HD-15... a machine that takes advantage of even the most recent developments in tractor application.

The design of the HD-15 also makes full use of new metals, new oils and greases, and the latest manufacturing processes. Existing models were not allowed to restrict Allis-Chalmers engineers... so they worked right from the ground up, matching part to part, assembly to assembly, and the entire tractor to its Allied equipment. As a result, the HD-15 offers new standards in ease of operation and service, as well as long-life performance. With outstanding balance characteristics, it handles both mounted and drawn equipment well, provides maximum flexibility for a wide variety of jobs.

We invite you to talk with your nearby Allis-Chalmers dealer to compare values . . . see for yourself how the HD-15 can be a big factor in helping you to plan effectively and work economically.

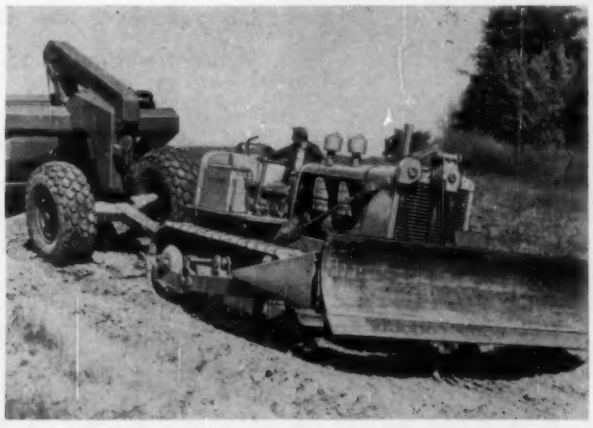
ALLIS-CHALMERS
TRACTOR DIVISION • MILWAUKEE 1, U. S. A.

HD-15
109 drawbar hp.
27,850 lb.
Six speeds forward to 5.8 mph.
Three reverse speeds to 4.5 mph.



Constant progress in earth-moving methods has been matched by such design advances as this HD-15 and its engine-mounted dozer . . . which were engineered and tested as a unit, right from the start.

This HD-15 Tractor Shovel is a tool which introduced a new era of tractor usefulness. It moves from job to job easily and does traditional jobs in a better, faster way.

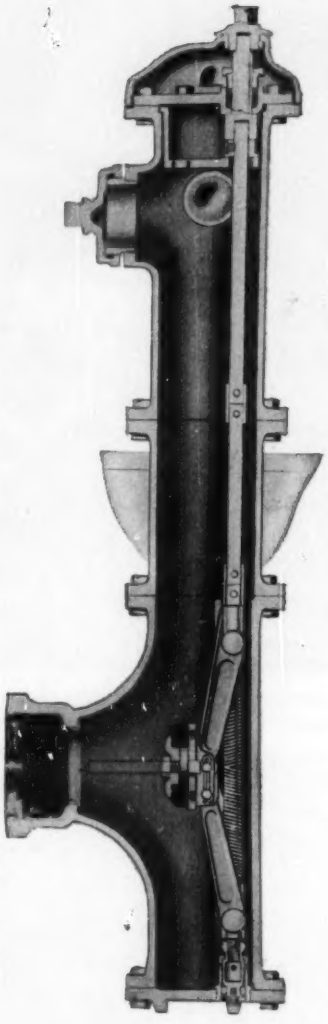


The improvements and refinements of really modern design take on new significance as budget planning gets more important. Extra yardage handled . . . or lubrication time saved means working more efficiently, at lower cost.

22 Minutes

FOR COMPLETE HYDRANT INSPECTION

with Rensselaer



The illustrations show how easy it is to remove and inspect the entire mechanism of the Rensselaer-Corey Fire Hydrant which has been the standard in many cities for more than half a century.

The parts can be removed, inspected and replaced in twenty-two minutes. No digging for repairs or for standpipe breakage. This hydrant opens with the pressure, by means of the powerful knuckle joint. Easy to operate and cannot stick. It is quick opening with free flow long radius curves. Hydrant will not flood.

Ask for Catalog No. G and see why the Rensselaer-Corey Hydrant is preferred by superintendents, fire chiefs and maintenance men. 109

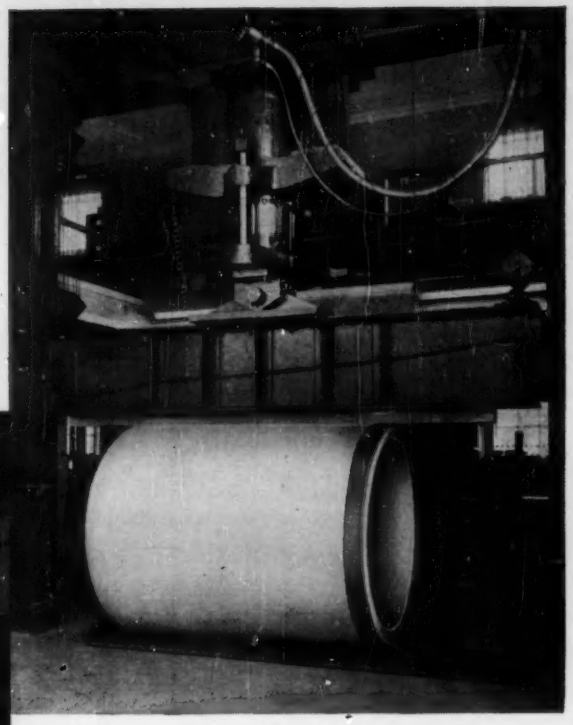
Rensselaer VALVE CO. TROY, N. Y.

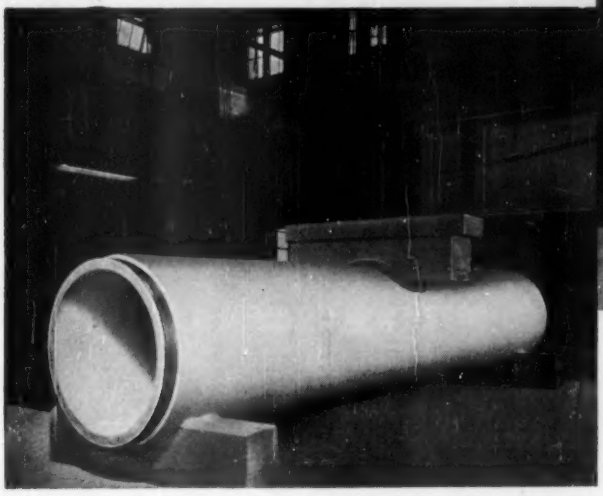
GATE VALVES • FIRE HYDRANTS • SQUARE BOTTOM VALVES • CHECK VALVES • AIR RELEASE VALVES

SALES REPRESENTATIVES IN PRINCIPAL CITIES

test after test assures the best

IN LOCK JOINT CONCRETE PRESSURE PIPE





▲ *Three edge bearing test in 300,000 pound capacity testing machine.*

◀ *Determining a pipe's beam strength in 300,000 pound capacity testing machine.*

Do you have conclusive proof of the fundamental characteristics of the pipe you intend using in your next water works project? Are you certain of its advantages? Do you recognize its limitations?

• • •

In Lock Joint's laboratory at Wharton, N. J. all guess work has been eliminated. Here, Lock Joint Pipes of all types and designs are tested to determine the exact extent of their ability to withstand back loads, beam loads and internal pressures. The most efficient modern equipment in the hands of highly trained personnel is used to give a tangible, practical demonstration of the high quality built into every type of Lock Joint Pipe.

• • •

These constant tests of our products are your assurance that, in its field, no finer pressure pipe than Lock Joint can be produced. Built in diameters from 16″ upward and designed for any pressure common to water works practice, these pipes will serve you unfailingly for generations.

SCOPE OF SERVICES—*Lock Joint Pipe Company specializes in the manufacture and installation of Reinforced Concrete Pressure Pipe for Water Supply and Distribution Mains 16″ in diameter or larger, as well as Concrete Pipes of all types for Sanitary Sewers, Storm Drains, Culverts and Subaqueous Lines.*

LOCK JOINT PIPE COMPANY

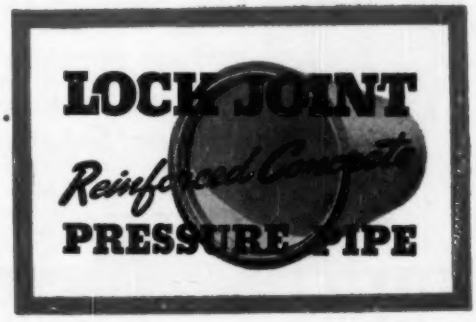
Established 1905

P. O. Box 269, East Orange, N. J.

PRESSURE PIPE PLANTS: Wharton, N. J., Turner, Kan., Detroit, Mich., Columbia, S. C.

SEWER & CULVERT PIPE PLANTS:

Casper, Wyo. • Cheyenne, Wyo. • Denver, Col. • Kansas City, Mo. Valley Park, Mo. • Chicago, Ill. • Rock Island, Ill. • Wichita, Kan. Kenilworth, N. J. • Hartford, Conn. • Tucumcari, N. Mex. • Oklahoma City, Okla. • Tulsa, Okla. • Beloit, Wis. • Hato Rey, P. R. • Caracas, Venezuela



NO "CRYSTAL BALL" NEEDED

Detectron "505"
PIPE DETECTOR
takes all guesswork out of Pipe Detection

- DETECTS, TRACES and CENTERS PIPE, CABLE, ETC.
- ESTIMATES EXACT DEPTH
- SEPARATES PARALLEL PIPE, CABLE and CONDUIT

A crystal ball might be one way to locate buried pipe or cable at an excavation site. But . . . a *better, safer* and *more efficient* way is to use the new, improved Detectron "505" that accurately pinpoints the exact length, depth and location. *Stop guessing —and be sure!*

Send today for FREE Catalog No. 54

THE Detectron CORPORATION
5420 VINELAND AVE., NO. HOLLYWOOD, CALIF.

FILTER SAND AND GRAVEL

Produced from an inland pit hence free from river contamination and foreign matter.

Shipment in bulk or bagged.

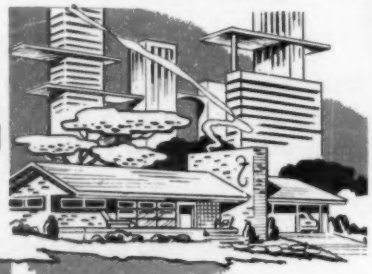
Many of the larger filter plants throughout the United States are equipped with our products.

PROMPT SHIPMENT

Inquiries and orders solicited.

NORTHERN GRAVEL COMPANY
Muscatine, Iowa
P. O. Box No. 307 Phone: 4261

the MODERN approach



Cast iron pipe centrifugally cast and with mechanical joints is the most efficient and economical means of modern day distribution. Serving the industry with Super de Lavaud cast iron pipe centrifugally cast in modern long lengths with standardized Mechanical Joints, Bell and Spigot or Flanged, with or without centrifugally applied cement lining. Rugged, dependable and economical.

General Sales Offices
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We invite inquiries to our nearest sales office
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350 Fifth Avenue, New York 1, New York

ALABAMA PIPE COMPANY
ANNISTON ALABAMA

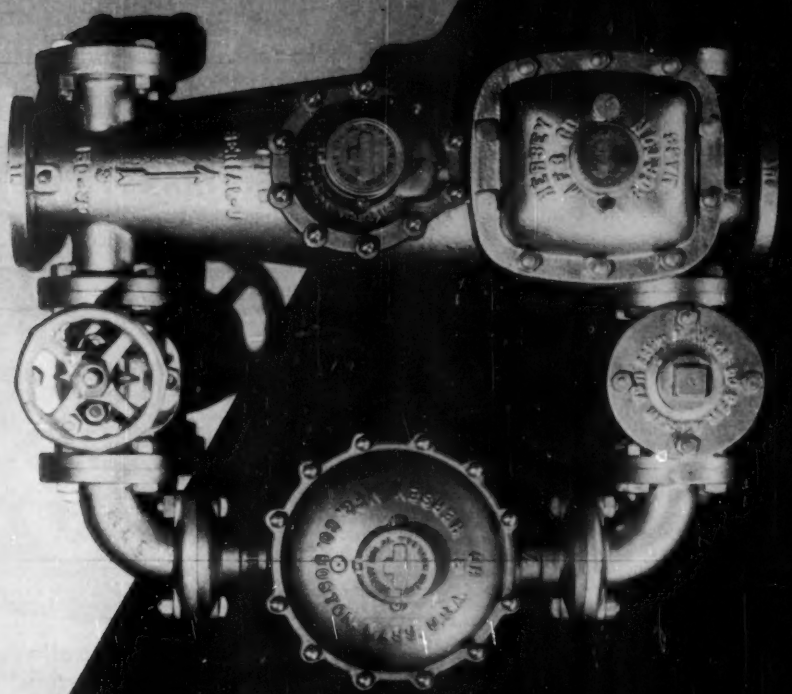
Public Property PROTECTION is our business

For your protection Stewart produces chain link wire and iron picket fence; wire mesh partitions; wire window guards; steel folding gates. Also flagpoles; settees; bronze plaques and other metal specialties. Write for catalogs. Please mention products in which you are especially interested.

THE STEWART IRON WORKS CO., INC.
2021 Stewart Block, Cincinnati 1, Ohio
Experts in Metal Fabrications since 1886

Stewart IRON and WIRE FENCES

HERSEY



THE HERSEY DETECTOR METER

has never been surpassed in its dependability and accuracy in the measurement of all rates of flow and it will deliver in an emergency the full capacity with a minimum loss of head.

This Detector Meter made only by Hersey

HERSEY MANUFACTURING COMPANY

SOUTH BOSTON, MASS.

BRANCH OFFICES: NEW YORK — PORTLAND, ORE. — PHILADELPHIA — ATLANTA — DALLAS — CHICAGO SAN FRANCISCO — LOS ANGELES

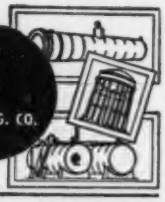
FOR almost a century Cole elevated tanks have provided a dependable water supply for mills and communities. Cole quality is assured by careful, experienced designing and watchful supervision from blueprints to finished tank. Send us your inquiries for tanks from 5,000 to 2,000,000 gallons — stating capacity, height to bottom, and location. *Write for latest Cole catalog —"Tank Talk."*

98 YEARS OF EXPERIENCE IN BUILDING TANKS

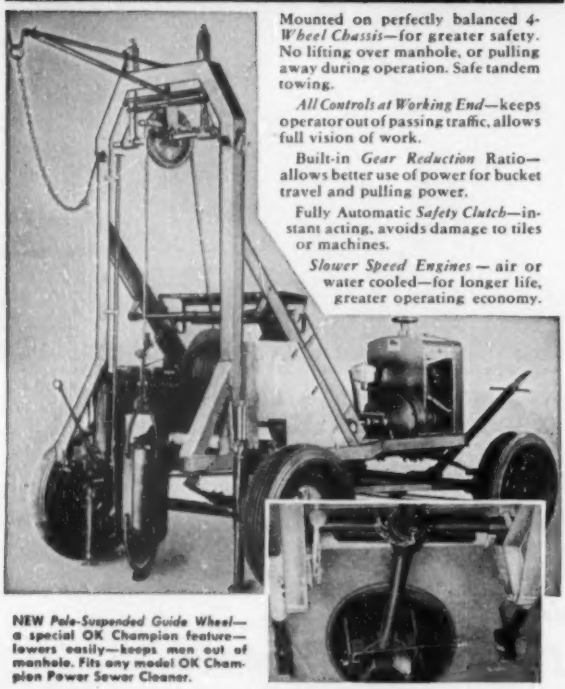
Established 1854

R. D. COLE MFG. CO.
NEWNAN, GEORGIA

ELEVATED TANKS • VESSELS • CYLINDERS
TOWERS • BINS • STANDPIPES



OK CHAMPION POWER SEWER CLEANERS



Mounted on perfectly balanced 4-*Wheel Chassis*—for greater safety. No lifting over manhole, or pulling away during operation. Safe tandem towing.

All Controls at Working End—keeps operator out of passing traffic, allows full vision of work.

Built-in *Gear Reduction* Ratio—allows better use of power for bucket travel and pulling power.

Fully Automatic *Safety Clutch*—instant acting, avoids damage to tiles or machines.

Slower Speed Engines — air or water cooled—for longer life, greater operating economy.

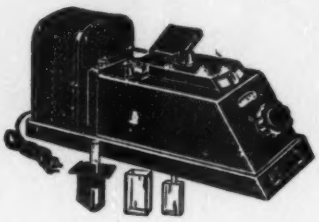
NEW *Pole-Suspended Guide Wheel*—a special OK Champion feature—lowers easily—keeps men out of manhole. Fits any model OK Champion Power Sewer Cleaner.

Write for latest OK Champion Circular

CHAMPION CORPORATION 4716 Sheffield Ave. Hammond, Ind.

KLETT SUMMERSON ELECTRIC PHOTOMETER

Adaptable for Use in Water Analysis



Can be used for any determination in which color or turbidity can be developed in proportion to substance to be determined.

KLETT MANUFACTURING CO.
179 East 87th Street New York, N. Y.

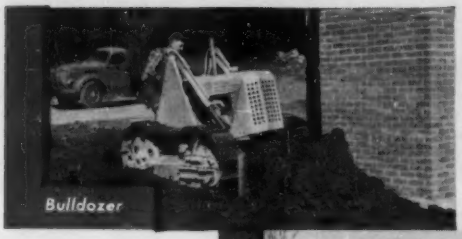
FLORIDA VACATION $59.50 WEEK

with COUNTRY CLUB PRIVILEGES

Unbelievable but true, many brick ground floor villas with bedroom, living room, electric kitchen, tile bath, completely furnished, $59.50 weekly. Two and three-bedroom villas slightly higher. At the ocean, playgrounds, shopping center, private country club.

Free booklet. Write today.

Ellinor Village
ORMOND BEACH, FLA.
DAYTONA BEACH AREA



Get them all... in one!

OLIVER "OC-3"

TRACTOR-LOADER

Quick change does it! In minutes, the "OC-3" tractor-loader converts easily to any of the tools shown here. You beat the cost of separate equipment for each job. You operate year-round in any ground condition doing more work... saving time, eliminating delays. The simple controls, all-hydraulic loader and maneuverability of this unit let you work where larger tractors cannot reach. Savings on equipment, hauling costs, (takes only a light trailer or truck) to say nothing of fuel economy, will pay for your "OC-3" tractor-loader in a short while.

Write today for a copy of a new folder on the "OC-3" tractor-loader, or visit your Oliver Industrial Distributor for complete details.

THE OLIVER CORPORATION

400 West Madison Street, Chicago 6, Illinois

a complete line of industrial wheel and crawler tractors

rubber-tired 12.6 m.p.h. TRENCHMOBILE®

On widely scattered city trenching work, Parsons rubber-tired 88 Trenchmobile drives anywhere around town at road speeds up to 12.6 m.p.h. A job 6 miles away can be started in less than 30 minutes from "now". It gives you low-cost, one-man trenching on gas and water mains, extensions, service connections . . . underground cables, lighting, sprinkling systems for parks, golf courses, airports . . . drainage, pipe reclamation, building footings, etc. It will pay you to get all the facts. See your Parsons distributor, or write us.

. . . . . .

Send to: PARSONS COMPANY, Newton, Iowa

for ☐ specifications ☐ bulletin on 88 Trenchmobile

NAME .....

TITLE .....

STREET .....

CITY, STATE CP377AM

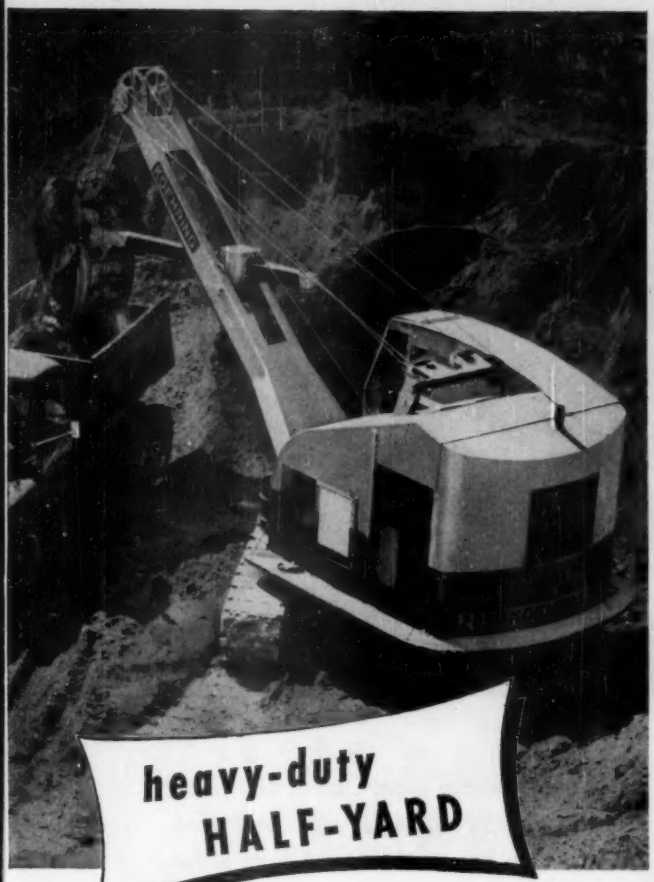
- **Drives anywhere at speeds up to 12.6 m.p.h.,** automotive steering, truck-type hydraulic brakes.
- **Digs 8 or 12 in. wide, in depths up to 5 ft.,** wide range of digging feeds up to 17 ft. per min.
- **Undercuts sidewalks, curbs, gutters, mains,** makes vertical set-ins . . . has hinged crumber.
- **Sloping ladder boom has positive down crowd,** starts cut fast, maintains grade in hard soils.
- **Dual-purpose friction clutch** drives bucket line, automatically protects against shock loads.
- **High-carbon cast steel buckets** have self-sharpening, easy-in, easy-out "Tap-In" teeth.
- **Shiftable, reversible belt conveyor** discharges spoil to either side, dodges side obstructions.
- **Hydraulically-controlled backfill blade** (optional) doubles Trenchmobile's usefulness.
- **43.6 h.p. gas engine,** and all main gearing enclosed in oil, assure steady, low-cost operation.

PARSONS

COMPANY • NEWTON, IOWA

(Koehring Subsidiary)

Also: 5 larger Trenchliners® . . . 2 wheel-types, 3 ladder-types, full crawler mounted



heavy-duty HALF-YARD

Combining heavy-duty stamina with big work capacity, this Koehring ½-yard 205 is readily adaptable to all kinds of city excavating, trenching, lifting and material-handling jobs. For example . . .

On shovel work, its compact design and short tail swing lets this ½-yard handyman maneuver into tight quarters, work close to buildings and poles. When your schedule calls for sewers and water main excavations, it's readily convertible to heavy-duty hoe . . . digs 17 feet-9 inches below tracks. As a heavy lift crane, it has a load capacity up to 10 tons. Conveniently converts to dragline, clamshell or pile driver, as your program requires. Works on crawlers, or travels around town at speeds up to 35 m.p.h. on rubber-tired truck mounting.

For full details on its many exclusive mechanical features, see your Koehring distributor . . . or write to us for illustrated 28-page catalog. Other heavy-duty sizes up to 2½ yards . . . lift capacities to 79½ tons.

portable BITUMINOUS MIXER

As a portable unit mounted on pneumatic tires, this versatile Kwik-Mix Bituminous Mixer is easily towed to the job, gives you "curb service" mixing anywhere around town. Handles direct pouring on street patch work, loads wheelbarrows . . . or with tower attachment (above) it stockpiles materials or loads batch directly into trucks. 10 cu. ft. size has 7'-9" overhead discharge . . . 14 cu. ft. size with tower loader has 8'-9" discharge height. Both sizes also are readily adapted as stationary overhead plants, mounted on skids, with extension track for power-raised skip.

Even-texture mix is assured every batch by pug-mill mixing action and uniform bitumen distribution. For complete mechanical details and more cost-cutting ideas, contact your Kwik-Mix distributor, or write us for Bituminous Mixer catalog.

Also ask about Kwik-Mix 3½ to 16 cu. ft. Dandie Concrete Mixers, and low-cost Moto-Bug® — the 10 cu. ft. power wheelbarrow for low-cost material handling.

KOEHRING
COMPANY • MILWAUKEE 16, WIS.
Subsidiaries: KWIK-MIX • JOHNSON • PARSONS

KWIK-MIX
COMPANY • PORT WASHINGTON, WIS.
(Koehring Subsidiary)

San Diego Prefers Concrete Pressure Pipe

Fast growing San Diego uses over 45,000,000 gallons of water each day, most of it supplied from reservoirs strategically located in the Incopah Mountain Range in back of the city. Concrete pressure pipe delivers nearly all this water to San Diego.

And San Diego continues to specify concrete pressure pipe. One of the latest installations in this area was the Sweetwater extension to the San Diego aqueduct. Here over 23,000 feet of 18-inch and 24-inch pipe was used to improve the water supply system.

Concrete pressure pipe provides maximum hydraulic capacity for extremely long periods of time. This, plus other outstanding advantages, such as immunity to rupture or blowout and the little or no maintenance required, make it important for every city to investigate its use for water conduit systems.

Water for Generations to come

Concrete PRESSURE Pipe

AMERICAN CONCRETE PRESSURE PIPE ASSOCIATION
228 North LaSalle Street
Chicago 1, Illinois

why ? ? ? ? ? ? ? ? ?

are so many parking lots metered with DUNCAN-MILLER

BRADENTOWN, FLORIDA lot equipped with 225 Duncan-MILLER 10-hour parking lot meters. Rate is 2-hours for 5c, adjusted to Nickels, Dimes, and Quarter.

● That's an easy one to answer, especially by those cities who've used Duncan-MILLER curb meters over the past 16 years. Financially speaking, these cities will tell you there's absolutely no question as to Duncan-MILLER'S revenue producing dependability. When parking is extended to off-street lots, the preferred choice is for the Duncan-MILLER meter as a never-failing source of funds for financing their lots.

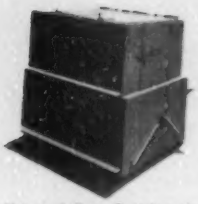
● Building the same meter too, for over a decade and a half gives us the know-how to make a rugged "work-horse" type of unit, with more TIME and RATE combinations than any other parking lot meter, using NICKELS, DIMES, and QUARTERS.

Ask us for details.

DUNCAN PARKING METER CORP.

835 N. WOOD ST., CHICAGO 22, ILL. ● FACTORY at HARRISON, ARKANSAS

Manufacturers of AUTOMATON fully automatic and MILLER manual parking meter



Universal Type Container is available in 4 to 12 cu. yd. capacities with or without top lids.

Apartment Type is available in 4 to 10 cu. yd. capacities. Note Sump Bottom, also available in Universal, Standard Drop Bottom and Drop Bottom Pressed Steel Type containers, for handling moist rubbish.

Drop Bottom Pressed Steel is available in 5 to 10 cu. yd. capacities without or with top lids.

Standard Drop Bottom, available in 2 to 10 cu. yd. capacities, is ideal for many materials handling uses.

Tilt Type, with two top lids, is available in 2 to 7½ cu. yd. capacities.

Multi-Karry Container comprises a master 6 cu. yd. container with three 2 cu. yd. box-like containers on casters. Each of the 2 cu. yd. containers may be rolled to a trash accumulation point. When loaded they are returned to master container and all three taken to dump and emptied by truck-mounted Dempster-Dumpster.

You will Dump High Costs, too

. . . when you install the Dempster-Dumpster System of Trash and Rubbish Collection

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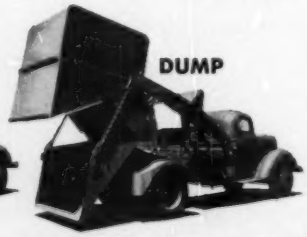

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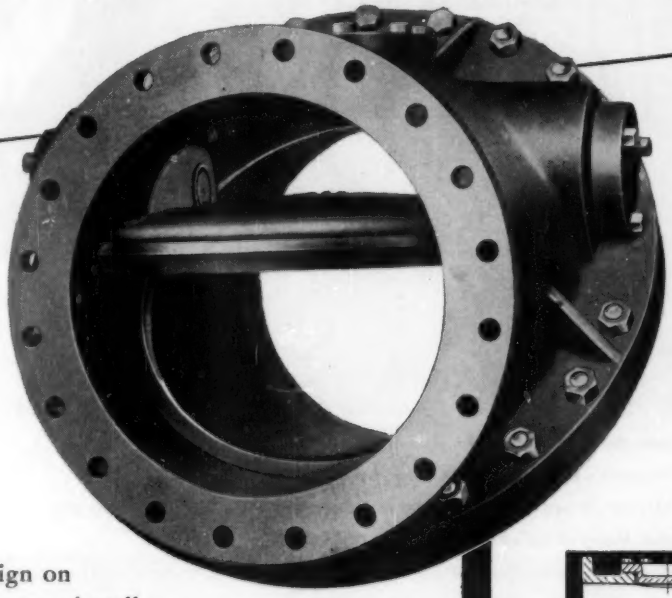

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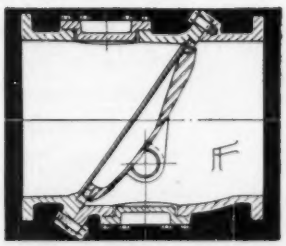

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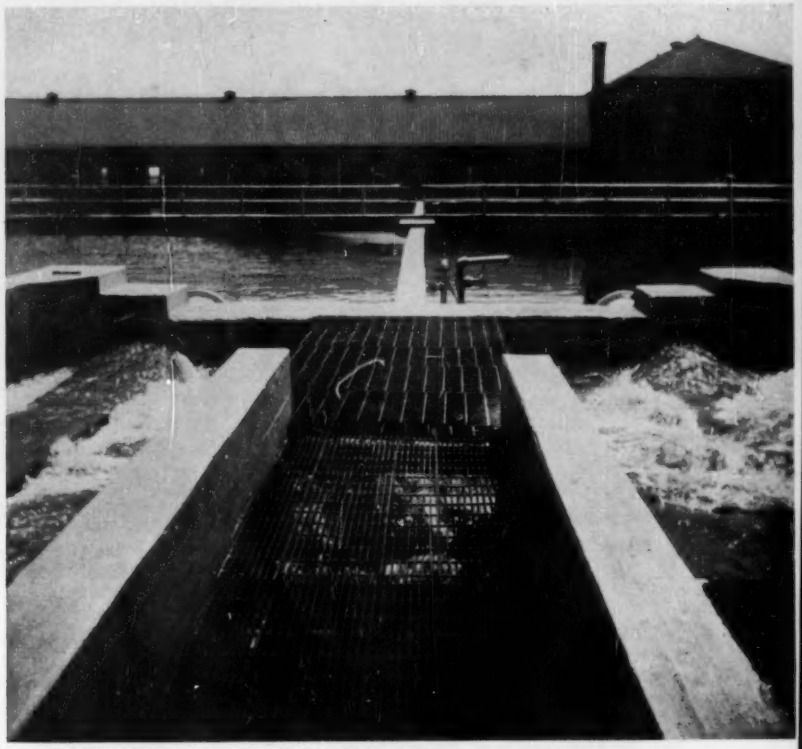


Activated-silica coagulant is used with alum as an aid to removal of impurities. Note the vigorous mixing action at either side of the channel.

Water quality improved when the activated-silica process went into effect at Wilkinsburg, Pa.

By R. B. ADAMS
Superintendent of Purification
The Wilkinsburg-Penn Joint Water Authority

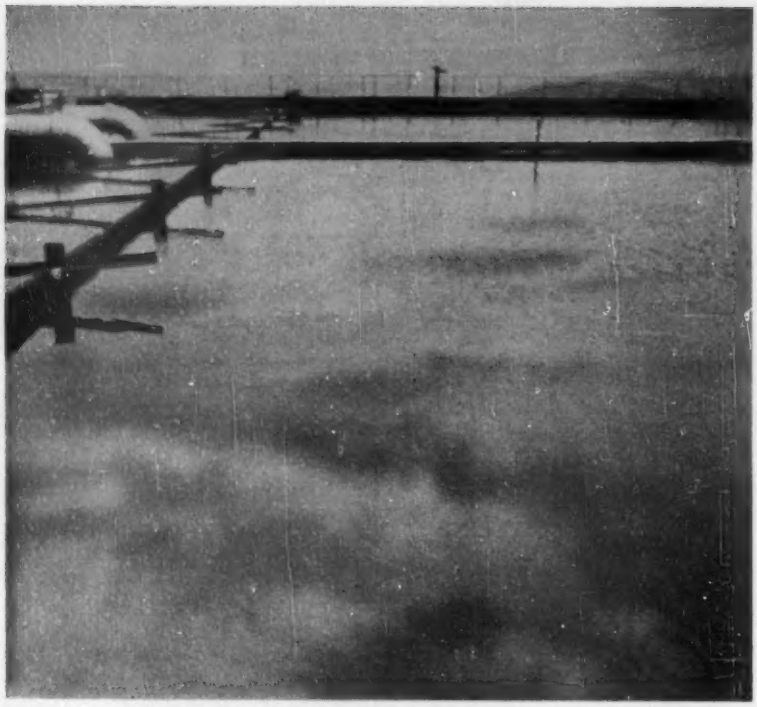
THE FILTRATION PLANT of The Wilkinsburg-Penn Joint Water Authority, serving one of the larger Pittsburgh suburban areas, has always had a difficult water to treat. The river water, which receives large volumes of acid mine wastes, has a high sulfate, aluminum, iron, and manganese content, and low turbidity, color, pH, and bicarbonate-alkalinity content. The removal of aluminum, iron, and manganese in the pH range of 7 to 8 by a one-step process constitutes the major treatment problem.

The plant, constructed in 1910, has a rated capacity of 20 mgd (million gallons daily). The major facilities include rapid-cixing units, flocculators, sedimentation basins, and Anthrafilt filters equipped with Palmer agitators. The source of water supply is the Allegheny River.

In the past, treatment consisted of prechlorination in the marginal range to oxidize the iron, coagulation with alum, pH adjustment with lime, oxidation of manganese with potassium permanganate, postchlorination, and taste-and-odor control with activated carbon and chlorine dioxide. This treatment was usually effective, although the soluble aluminum content of the filtered water was frequently too high and the colloids of iron and manganese could not be properly handled.

High concentrations of iron and manganese present a colloid problem when they are oxidized and precipitated in the low pH range of 7 to 8. Under such conditions, exceptionally good coagulation becomes a major factor in breaking the colloids. Alum coagulation without the use of a coagulant aid has not been satisfactory when the raw water pH was high—6.5 to 7—or when the iron and manganese contents were high.

To determine a method that would help this coagulation process, we ran



Flocculation and settling proceed with a heavy, fast-settling floc (foreground).

jar tests, using activated silica in conjunction with the previously described treatment. The results were favorable enough to warrant a plant-scale run. It should be pointed out that jar tests are very difficult to manipulate in connection with the study of iron and manganese colloids when several chemicals are introduced and close pH control is required. The time element is significant in respect to the formation and removal of the iron and manganese colloids. Conclusions that are based on a series of jar tests can very well be misleading. Frequently, a plant-scale run is required to properly evaluate over-all efficiency.

Continuous Activation Essential

A number of problems became evident when the activated silica process was considered for plant-scale use. The volume of silica sol required exceeded any space allotment available for batch preparation. Therefore, continuous activation was essential under the prevailing circumstances. Continuous activation with a 5% alum solution was tried and later discarded because of difficulties in control and resultant gel formation. Various other methods of activation were considered and after consulting with representatives of industry, activation with sodium bicarbonate was selected as the simplest and most foolproof method for our particular layout.

Silica Sol

Basically, the activating unit is assembled to produce a 1.5% silica sol. Sodium bicarbonate is fed dry into a mixing pot with continuous agitation. Water is automatically added through a magnetic valve which is controlled by an electric float switch. The sodium bicarbonate solution is maintained at 5.8% concentration and is pumped to a flowrator instrument where the actual flow in gpm (gallons per minute) is indicated and then into the main activating pot. Undiluted N-type sodium silicate is pumped with a proportioning pump into the activating pot.* A supply of water passes through another flowrator and into the activating pot in order to maintain the desired dilution. The contents of the activating pot are stirred constantly at high speed and flow by gravity to aging tanks. One to two hours of retention is maintained in the aging tanks and then the solution overflows into a feed line where, with more dilution water, it travels to the application point.

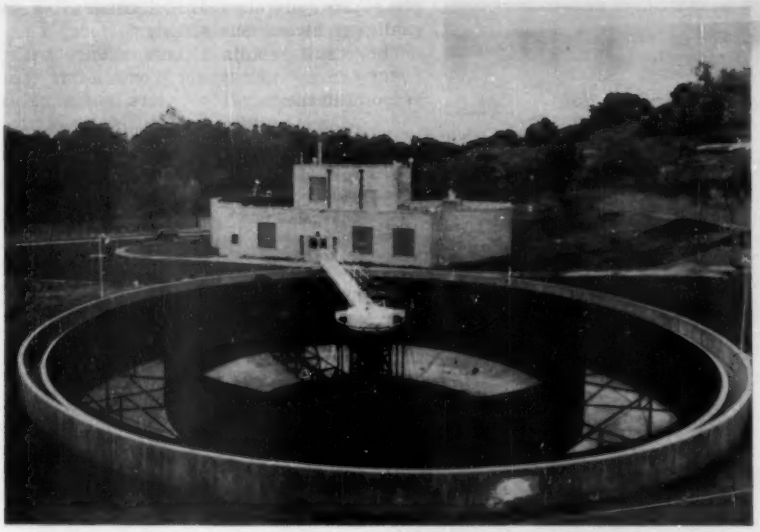
Routine methods of control are required with this system of activation. The sodium bicarbonate feed is check-weighed at one-hour intervals; the sodium bicarbonate solution is titrated with standard acid at two-hour intervals; the volume of N-type sodium silicate being pumped is measured at one-hour intervals; and the flowrator instruments are adjusted at one-hour intervals. The sodium bicarbonate feed is calculated to give 100% neutralization. In actual practice, the extent of neutralization has thus far been checked by determining the causticity of the aged solution. It has been possible for the most part to control the causticity within 500 ppm, plus or minus. As long as this tolerance is not exceeded, there is little difficulty with the process. However, we are hopeful that the control in the future can be held to a much closer figure than it is at present.

Advantages of Process

The advantages of the activated silica process as it applies to the treatment of Allegheny River water may be summarized as follows:

1. The average filter runs have increased from 53 hours to 72 hours, or 35%.
2. The average wash-water requirements have decreased from 2.4% to 1.8%, a reduction of 25%.
3. The over-all efficiency of the iron-removal treatment has improved tremendously with the use of the activated silica treatment. Approximately 93% of the iron is removed in the sedimentation basins.
4. Manganese can be oxidized and coagulated at lower pH values (7 to 8) with a marked reduction in the colloidal problem. Approximately 75% of the manganese is removed in the sedimentation basins with only a 1½-hour retention period.
5. The soluble aluminum content of the filtered water has been reduced to a very low concentration as long as the controlling pH is not held above 7.5.
6. The resulting hardness of the finished water will average 10 ppm lower than with the conventional treatment.
7. The over-all cost of chemical treatment is reduced when the activated silica-alum combination is compared with alum coagulation alone. The extent of the savings depends upon the characteristics of the raw water, i.e., the more difficult the coagulation problem, the greater the savings.

* N-Type is a registered trademark describing sodium silicate made by the Philadelphia Quartz Company, Philadelphia 6, Pa.



Unprecedented methods are used throughout the industry-city treatment plant. The oxidator-clarifier is in the foreground, and the small-size digesters are at the rear.

High-Speed Sewage Treatment

An industry writes its own rules when building a new plant that purifies its industrial wastes as well as the domestic sewage from Golden, Colo.

PRECEDENT WAS SET ASIDE when the engineers on the staff of the Adolph Coors Company, beer and porcelain manufacturers, designed a treatment plant to purify the wastes from its brewery and from the City of Golden, Colo. For example, the fast-acting, high-temperature thermophilic bacteria are being used for digestion in place of the conventional mesophilic bacteria. Also unprecedented is the use of a pressure-flotation method to concentrate sludge going to the digester. The use of an oxidator unit, while not new, demonstrates a growing interest in this type of treatment.

Solids to Be Lower

The use of the oxidator, a product of Process Engineers, Incorporated, of Los Angeles, enables the plant to provide a type of treatment that is more desirable than primary settling alone. The designers expect to obtain 75% or more reduction in total solids and 90% more reduction in BOD when the plant is operating properly.

The unit is circular; aeration of the sewage and recirculation of sludge takes place in an inner ring. This method induces flocculation and grease coagulation, and improves clarification. Sedimentation proceeds in the outer ring, and the sludge drops to the bottom of the hopper-shaped tank. The treated effluent flows over the outer weir. Air is supplied at the rate of 1½ cubic feet per gallon of sewage in this phase of treatment.

Digester Size Cut One-Third

Concentration of the sludge takes place in a Process Engineers sludge thickener by pressure flotation when the sludge is delivered to the digester. During this stage, the sludge is supersaturated with air and allowed to enter the flotation unit under 30 pounds of back pressure. The pressure is liberated suddenly and the dissolved air is released in fine bubbles that carry the sludge to the surface. The sludge, known as "float," is skimmed off. It then drops into the digester at a solids content of 10 to 15%. The subnatant, or flotator, liquor returns to the oxidator in fresh condition.

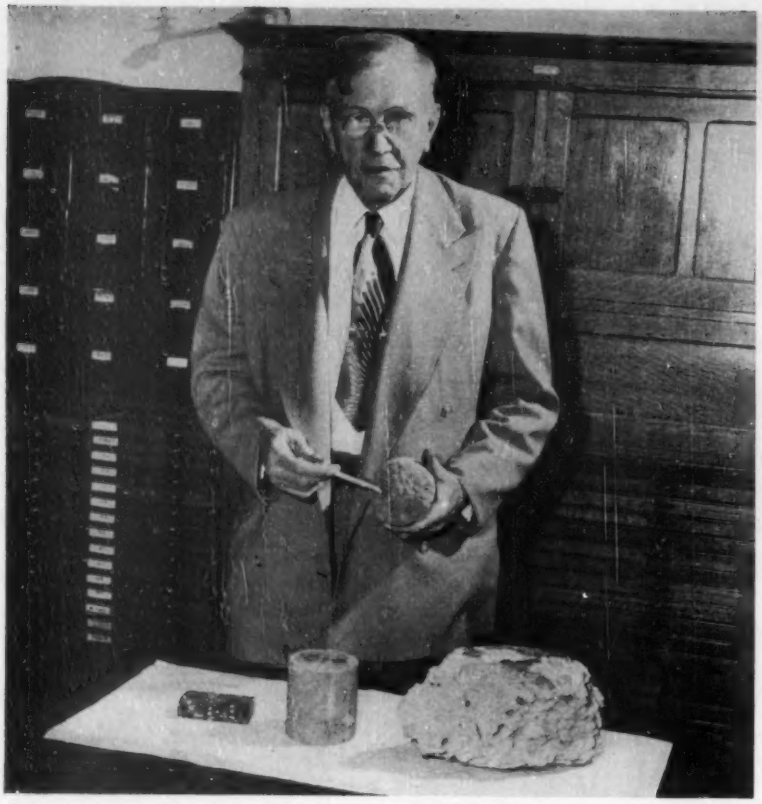
The use of thermophilic bacteria for digestion is advantageous. These bacteria can complete their action in about three weeks as compared to the conventional mesophilic bacteria which requires as long as two months. This feature allowed the designers to reduce the size of the digestion tanks by one-third.

In the past, the difficulty with the thermophilic bacteria has been to maintain optimum temperatures of 122° F. or more. Designers have found that this high temperature caused trouble with the coils and heat exchangers, permitting the sludge to "cake" and decrease the effectiveness of the apparatus. In the new design, heat is supplied by direct injection of steam from a 5-hp boiler to a mixing tube that discharges at the center of the digester. The boiler uses gas from the digesters for fuel. The tanks have been very carefully insulated with glass wool and 4 inches of cork to prevent loss of heat.

Plant Capacity

The plant is designed to treat 3 mgd (million gallons daily), of which half will be industrial wastes and half municipal sewage. Cost of operation will be borne in the same ratio.

The plant uses two Dorrco-equipped digesters, each 35 feet in diameter and 30 feet deep. They operate in primary and secondary stages. The primary digester has a fixed cover, the second, a floating gas-holder comer.



Samples of material from Peoria's streets: a core of soil cement (in City Engineer Wilson's hand); on table (left to right), bituminous cement used for final surfacing, cement mixed with plain sand, and a 6-inch chunk of the soil-cement base.

Peoria Proves the Case For Soil Cement

TWENTY YEARS AGO, the engineering profession would have looked upon the mixing of soil and cement for street pavement as a scatterbrained, crackpot scheme. Today, the mixture may be regarded as a practical, economical base for all-weather streets. Five years of low-maintenance costs and 112,000 satisfied citizens in Peoria have proved the case for soil cement.

During and after the war, the gravel and macadam streets of this central Illinois city suffered from "deferred maintenance"—neglect. Because of the wartime economy, it was impossible to keep streets in top-flight condition when the only available supplies of asphalt and cement were headed for distant air bases. The post-war condition of streets the nation over showed the effects of these shortages.

In Peoria, the streets were in such bad shape that a major revision in street-construction policy would be justified. Soil, mixed with cement, and compacted under controlled conditions, had provided good street bases elsewhere. And so, the city, in 1948, used it on a three block stretch in Peoria. This test job cost $1.92 per square yard, including a better quality of bituminous surface.

The results obtained were satisfactory to City Engineer Harry E. Wilson and the property owners. The following year, he expanded the program to about 12 city blocks and kept expanding the area each year, until today approximately 150 city blocks have been paved with what 20 years ago would have been considered a forbidden mix.

Costs Have Gone Up

Costs have risen above the original $1.92 per square yard. Most of the work has averaged about $2.50 per square yard, including the asphalt surfacing. The highest cost, which includes curbs and much drainage structure, was $3.19. The lowest, for pavement alone, was $2.24. One contractor, the Seneca Petroleum Company, has built virtually all the streets.

Soil Sampling

When the first soil-cement project was considered, soil samples were taken from all parts of the city, and a map was drawn that located and classified the various native soils. Very heavy clay, or any solid that is high in organic matter, generally makes a poor soil-cement combination. These soils have to be blended with cinders or sand to bring them to a satisfactory consistency. In Peoria, the amount of cement, by weight, added to the soils, has ranged from 10% to 16%, and averaged 10% to 12%.

The procedure followed in building a soil-cement base is well established in this city. First, a Caterpillar No. 12 motor grader scarifies the old gravel base and any bituminous mixture that may have been placed previously. A Seaman Pulvi-Mixer, pulled by a "Cat" track-type of tractor, refines the materials on the scarified base. A Hercules cement spreader applies the specified amount of cement, and the Seaman Mixer quickly blends it thoroughly with the soil.

Mr. Wilson specifies a 6-inch base. This thickness requires about 8 inches of loose material to be mixed in the initial process. Water is added by a truck sprinkler and mixed with the soil and cement until it reaches a point of optimum moisture content. Standard tests determine this content, but for a rule of thumb used by the city inspectors, the soil generally has the proper moisture content when it can be rolled into a ball which will hold to-

gether firmly when squeezed by hand.

When the soil has been moistened properly, a sheep's-foot roller, hauled by tractors, then goes to work on the layer. When the rollers have "walked out" of the layer, they are removed; a small, rubber-tired tractor, pulling a harrow, follows to remove all compaction planes. A Bros rubber-tired, wobble-wheel roller follows for final compaction of the top 1½ inches of material. Water is added as needed to keep the material from drying out.

Weak Points Detected

Within 24 hours, a light covering of MC-3 cutback asphalt is applied over the top of the layer. This covering acts as a curing compound, sealing in the moisture. Peoria traffic is prohibited for 7 to 10 days after construction. During this period, the base is inspected for bad spots, compaction planes, and areas missed near gutters and curbs. A faulty spot can be detected by tapping it with a pick. If this produces a "punky" sound, the material should be knocked out and replaced. Faulty spots are knocked out to a depth of 6 inches and refilled.

The street surfacing is completed by the addition of 1½ inches of bituminous concrete that meets Illinois State Highway Department specifications, classification 1-11, the state's best grade of bituminous concrete surfacing. This is applied hot, at 290° F., with a Barber-Greene finishing machine and rolled with a tandem roller.

Work Carefully Scheduled

In general, between 2,000 and 3,000 square yards of soil cement are laid in a day's time in the Peoria work. Mr. Wilson's specifications require that the soil-cement process on any project undertaken on any one day must be completed within six hours after the first application of water.

While a 6-inch, soil-cement base is normally used, Mr. Wilson has boosted this to 8 inches on a 7,000-foot stretch currently under construction. This is a semi-arterial street, 40 feet wide, that is being financed by motor-vehicle funds. The construction has been reviewed and approved by the Illinois State Highway Department.

Peoria is well pleased with the results of soil cement. The surfacing has met a demand for more streets at a lower cost to the residents, lowering the cost from $10 per running foot to about $6.50. The five-year-old streets are in as good condition as when they were originally built. The city hasn't spent a nickel for repairs.

In five years of constant use, Peoria's oldest soil-cement street has required no repairs. Only a few shrinkage cracks, which are usually expected, have appeared.

A Caterpillar No. 12 motor grader (right) shapes the soil cement after it has been mixed by a Seaman Pulvi-Mixer (center) pulled by a tractor. The water truck precedes the two machines, applying the necessary amount of moisture to the mixture.

In a step-by-step demonstration, the St. Louis County Health Department and U. S. Public Health Service illustrate the method of building a ramp-type fill. First, a Bullclam makes a shallow cut at the foot of the ramp site.

The Ramp-Type Sanitary Fill

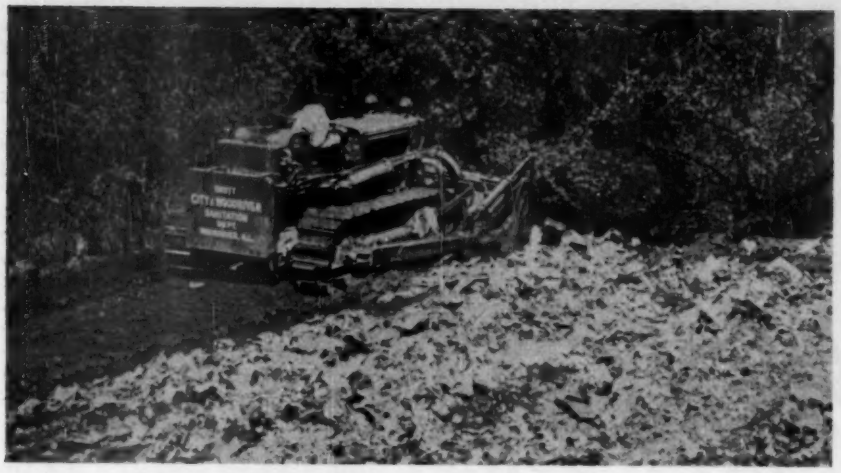
When the ramp is complete, trucks back down the slope, depositing refuse against the face of the ramp. Note that three trucks can discharge their refuse at once.

MUNICIPALITIES have three techniques available for the construction of a sanitary fill: the trench, area, and ramp methods. The trench method is best suited to flat areas; the area method is used frequently for irregular terrain. The most recently developed method is the ramp-type operation, also used in flat or gently rolling areas.

The ramp technique has the advantage of supplying sufficient width at the site to enable a number of trucks to maneuver easily at the same time, providing flexibility in unloading operations. No records are yet available to compare its land requirements with the older trench or area methods.

To acquaint officials with the tech-

The tractor spreads and compacts the refuse, a procedure that takes 3 minutes.



The tractor pushes the earth from the slope and spreads it over the compacted refuse.

A demonstration in St. Louis County, Mo., shows how this type of fill is built; Iowa City, Iowa, and Columbia, S. C., illustrate its application

nique for building the ramp fill, the St. Louis County Health Department and the U. S. Public Health Service jointly sponsored an on-the-spot demonstration recently near Creve Coeur, Mo. About 100 health and sanitation officials from 65 nearby cities witnessed the procedure.

The demonstration took place on rolling ground to show the method's adaptability to such terrain. An International TD-14A crawler tractor, equipped with a Drott Bullclam, was used to build the fill. William Sheppeard, who operates a sanitary landfill for Greenville, Texas, and who is well known in this area for skillful fill operation, was at the controls of the tractor.

In the past year, two cities—Columbia, S. C., and Iowa City, Iowa—have taken the initiative in adopting the sanitary fill for refuse disposal and the ramp method for building it.

Iowa City, Iowa

Iowa City has dedicated a 13-acre area, formerly an intolerable, offensive, insect-ridden, rat-infested burning dump, to fill-and-cover. About 30,000 people contribute refuse to the fill, yet only two men are needed to dispose of the refuse.

In following the ramp procedure for building the fill, the city employs an International TD-14 crawler tractor that has been equipped with a Drott Bullclam front-end bucket to bulldoze the earth from a shallow trench that adjoins the ramp. Trucks then dump the loads of refuse over the top of the ramp into the trench. The tractor compacts the refuse and covers it, at the same time that it excavates for the next day's trench. A valley-like trench is dug so that the tractor can operate transversely across its width. This device allows a substantial reduction in the amount of maneuvering that is required of the tractor by other methods of building.

Although Iowa City has not been using the sanitary fill long enough for conclusive results, the first year's operation of its fill has been satisfactory. In place of the offensive open dump, the city has a clean, sanitary method for refuse disposal that dis-

The newly covered refuse becomes a ramp that stands ready for the next day's contribution. The completed fill will meet the elevation at the top of the built slope.

How two cities use ramps at their sanitary fills—

Iowa City disposes of refuse on a sanitary fill that was the site of a burning dump.

Columbia's ramp-type fill is being built on an unusually long and wide-fronted scale.

Regular refuse, such as this load delivered by Columbia's Pak-Mor truck, is deposited at the top so that it can be spread down the ramp in a 3-foot layer. Brush is deposited at the bottom of the ramp in order to provide more thorough compaction.

courages rats, eliminates insect breeding, and reclaims wasteland for useful purposes. The adoption of the sanitary fill is one of the management improvements introduced by City Manager Peter F. Roan, who ultimately plans to convert the reclaimed land into a park and playing field.

In line with the all-out effort for improved sanitation, the city has also acquired recently two new Leach Packmaster refuse-collection trucks that are mounted on Dodge chassis. A total of four covered, compactor-type trucks now collect the city's refuse. In addition, the city maintains a small pick-up truck with an insulated body that is used chiefly for collection of dead animals. Trucks are all painted white and the men are furnished with white uniforms to reflect the meticulous sanitation program that the city maintains.

Columbia, S. C.

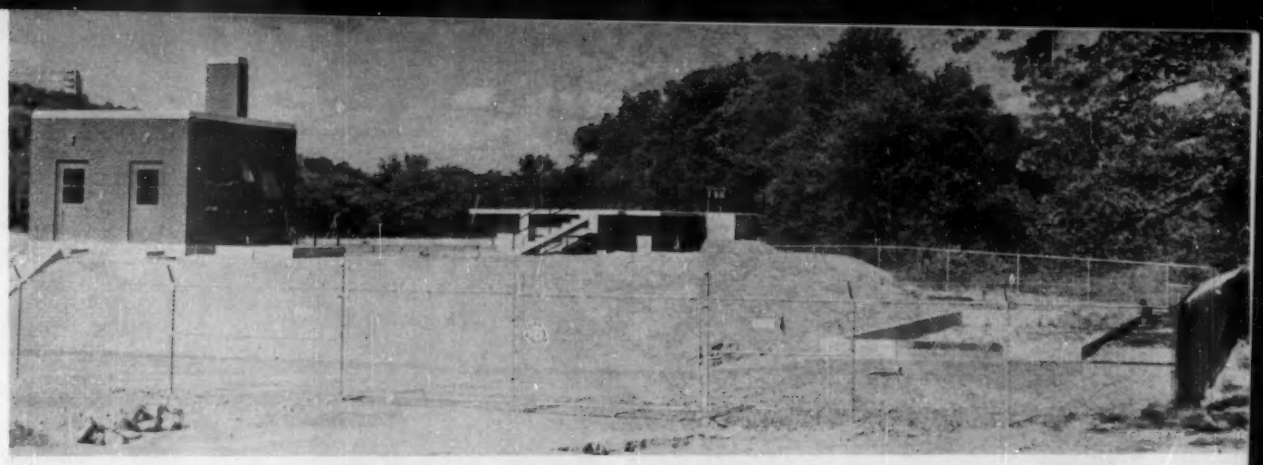
Columbia's first venture with the sanitary-fill method of refuse disposal promises to be record breaking. The ramp that has been built resembles a young mountain or, at least, a large side slope. In this city's single but rather long and extended operation, the city is reclaiming a deep, pitlike area that adjoins railroad property. Since this area has a rather dense population, all operations have to be conducted in a manner that will insure the absence of nuisances or objectionable odors.

The fill receives refuse from about 87,000 people and extends over approximately 3 acres. The entire site was excavated to a depth of 18 feet; the earth is stockpiled within the area for future use in covering the refuse. City refuse trucks deliver their loads to the extensive side slope on a comparatively wide front. The tractor eases it down the slope, compacting it into a 3-foot layer so that the second tractor and scraper can cover it. Brush is deposited at the base of the ramp and is provided with a substantial amount of compaction both by the tractors and overburden of refuse.

Refuse Covered Each Night

Each night, the day's refuse is covered with 3 or 4 inches of earth as an odor preventative. Sections of the completed fill are topped with 3 feet of earth.

The operation is conducted under the immediate supervision of Superintendent M. W. Roper, and the general administration of City Engineer Harry O'B. Bellinger.



Middleburg's plant is built high above the natural ground level to facilitate operation and dispense with excessive excavation.

Imhoff Tanks Prove Best

. . . for the conditions prevailing in the little municipality of Middleburg, Pa.

By S. J. ZACK
Gannett Flemming Corddry & Carpenter
Consulting Engineers
Harrisburg, Pa.

MIDDLEBURG, PA., with its 1,300 residents, is one of the smaller municipalities in Pennsylvania. Yet, when the state began its current drive to clean up its streams, the town found itself on a par with the big cities of the state.

For guidance, the municipality retained our firm, instructing us to design and supervise the construction of a modern sanitary sewerage system. We had to include both sewers and a treatment plant that would meet state requirements and still fit the municipal budget.

Requirements Modified

The original requirement for complete treatment called for primary settling plus some type of biological oxidative purification. However, after taking the matter up with the state authorities, Middleburg was permitted to build a plant providing primary treatment and defer construction of the secondary treatment unit for an indefinite period.

The next problem was to decide upon the type of plant to be built. The engineering study disclosed a site that would be convenient to the sewer discharge point where the ground elevation was low. This offered a further economy in building the primary settling tank as an integral unit with the digestion chamber by employing the Imhoff tank, a classic in sanitary engineering. Although it is infrequently used today, this type of tank still has many useful applications. In our design, we planned that the settling portion of the Imhoff tank would be a relatively high structure so that the digestion portion beneath would not require excessive excavation. Had the ground elevation been higher, we undoubtedly would have used the conventional separate sludge-digestion design. The plant is designed for a population of 1,700 and to treat an average sewage flow of 160,000 gallons per day, including acceptable industrial waste.

When the sewage enters the plant, it first passes through a Chicago comminutor equipped with the usual bypass and screen that can be used when the comminutor needs to be taken out of service.

Two Worthington Freflo vertical centrifugal pumps then pick up the sewage so that it can flow through the rest of the plant by gravity. Each pump will deliver 100 gpm (gallons per minute) against a 27-foot head and 250 gpm at the maximum level in the wet well.

The sewage then enters the settling chamber of the Imhoff tank where it is subject to a two-hour detention. The settled sludge passes through a slot in the bottom into the digestion chamber. This provides 4 cubic feet of volume per person served. Digested sludge can be drawn onto open drying beds that measure 19 feet wide and 68½ feet long. These provide 0.75 of a square foot per person served.

A Wallace and Tiernan chlorinator that is manually operated provides the final purification to the effluent, although secondary treatment through trickling filters or aeration tanks can be provided later should they become necessary. The chlorinator can deliver 25 pounds of chlorine per day.

The sewerage system and the plant is financed through a $475,000 bond issue which pays 2.78% interest. Service charges amount to about $45 to $50 per family per year. These are based on a metered rate for metered water customers and a rather detailed water-fixture charge for flat-rate water customers. The metered rate runs as follows:

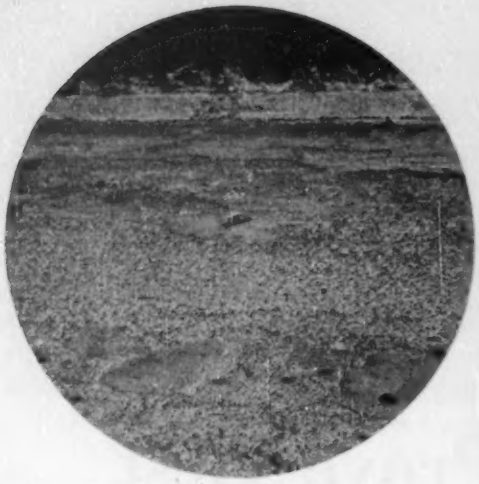
Gallons of Water Used	*Charge per 1,000 Gals. ($7.50 min.)*
First 3,000	$2.50
Next 5,000	1.50
Next 42,000	.75
Next 50,000	.50
All over 100,000	.30

The fixture rate runs as follows:

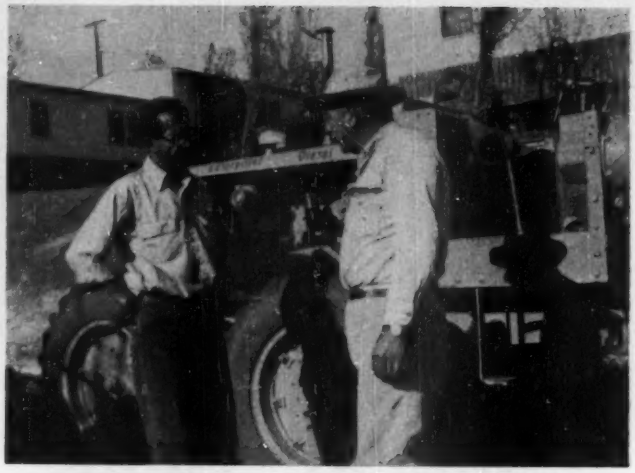
	Per Quarter	
	Residential	*Commercial*
First Fixture	$7.50	$10.00
Additional Fixtures		
Sink	2.00	2.50
Bathtub or shower	1.50	2.00
Lavoratories	1.50	2.00
Toilet or urinal	2.00	2.50
Laundry tub	2.00	. . .
Cellar or garage drain	1.00	1.50

Industrial users pay $60 per 1,000 gallons per day contributed, plus 0.1% for each per cent of suspended solids over 150 ppm, or each per cent of BOD over 200 ppm.

The plant was constructed by an authority and was leased to the borough to operate. The borough guarantees $2,500 per year from its general fund.



Benicia's street surfacing was badly deteriorated.



A short strategy meeting starts corrective measures.

Forced to Build by Force Account

City forces resurface 35,000 *square yards of streets when contractors are unable to schedule the work in favorable weather*

By RAY M. BAKER
Superintendent of Public Works
Benicia, Calif.

THE STREET PROGRAM had never been coordinated in Benicia, a city of 8,000 in the San Francisco area. The streets and drainage structures had all been constructed by subdividers and accepted by the city. The lack of sufficient inspection and construction standards at the time of building the streets had created problems in maintenance that were almost impossible to overcome, without spending money out of proportion to that which would be considered normal for maintenance of reasonably well-constructed streets.

35,000 Square Yards of Repair

By the summer of 1953, the residential street surfaces had been allowed to deteriorate so badly that some 35,000 square yards of major repairs were needed. Fortunately, the base, in the main, was in good condition.

We proceeded to obtain unit bids which were satisfactory. However, since it was the beginning of the fiscal year, local contractors were just beginning other large-scale operations. It was impossible to obtain the services of a contractor who would commit himself to a starting date, which the city needed in order to coordinate our operations.

We then considered doing the work with our own forces. Although there was not much financial advantage in doing the work ourselves—we would have saved one cent per square yard—the big factor was time. We were anxious to have the surfacing done while the weather was favorable. Therefore, we proceeded to do the work by force account.

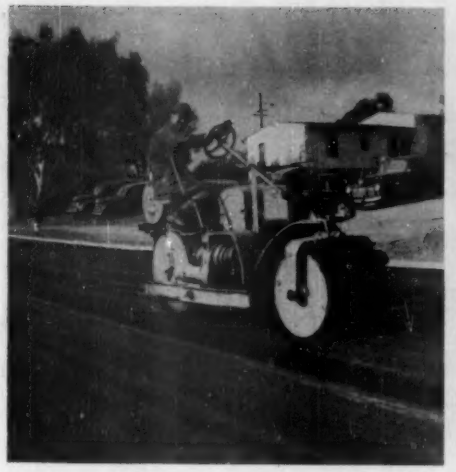
Preparatory to the reclamation project, we repaired holes, shaved off high spots with our Caterpillar 212 motor grader, swept up with our Austin-Western patrol sweeper, and flushed the streets clean with water from hydrants opened for the purpose.

We then placed a prime or tack coat of emulsion, cut in proportions of two parts to one part of water. We had on hand a Littleford 200-gallon emulsion sprayer which was intended for spot patching. We made up a spray bar with ten No. 1 spray tips spaced at 8-inch intervals. The device effectively sprayed the diluted emulsion, covering a 6½-foot-wide strip. We then "gate-spread" a plant mix of ¼ inch, or smaller, aggregate that had been mixed with slow curing (SC4) cutback asphalt.

Pavement Curing

The plant mix was placed and shaped with the grader. A rubber-tired roller then made a series of passes with succeedingly finer cuts until sufficient compaction had been obtained.

The paving was allowed to cure for 60 days while it was carefully inspected for reaction to traffic. The paving met with our requirements,



A roller tacks down the layer of surfacing mix—

And Benicia's blighted roadways receive a smooth, all-weather surfacing.

so we proceeded with sealcoating, which is a requisite, in my opinion, for good sealing and wearing qualities of any type of asphalt paving.

We applied MC5, or SC6, cutback asphalt, depending upon the weather, at a rate of 0.17 gallon per square yard. This layer was then covered with rock at the rate of 15 pounds per square yard. The rock was graded so that it would pass a ¼-inch screen and be retained by a No. 10. This layer was dragged and surplus rock was removed and returned to stock. The surface was then compacted with a small Buffalo-Springfield roller. Oil distribution was handled by the dealer selling the oil. We purchased a Baughman spreader and installed it on our truck to spread the rock.

Our cost for materials amounted to 14 cents per square yard, and labor and equipment cost 6 cents per square yard, or a total of 20 cents per yard.

Unit bids would have been 21 cents per yard, so the cost saving in doing the work ourselves was not too great. However, we did finish our program before the weather turned cold and wet, and took care of our regular maintenance work as well. Moreover, the city is pleased with the results.

Other Improvements

Because of the lack of coordination of our street construction and maintenance program, the need for improvement was pointed out by the City Council when I assumed the post of Superintendent of Public Works two years ago. At that time, the city possessed only one pick-up truck, flat-rack truck, small patch roller, and street sweeper. The sweeper was in such disrepair that it was unusable. Also, the city had no corporation storage facilities.

We have purchased since then one of each of these—Caterpillar grader, wheel-tractor loader, dump truck, water wagon, dump body which was installed on the flat-rack chassis, rock spreader, transit, spray rig for weed eradication, and numerous miscellaneous tools. We also have awarded a contract for a corporation storage and shop building.

The results of this program are even now becoming apparent to the taxpayers. In another two years, the purchased facilities and services will have rendered such good results that the taxpayers will consider the monies expended to be a good investment.

How to Prevent Progress

A WEST COAST economic consultant firm, Industrial Survey Associates, recently published in its *Direction Finding* a 10-point program for preventing a town from growing and making progress. Here are some ways to prevent progress, as reproduced in the *Tennessee Industrial Newsletter*:

1. Organize a group of well-known and well-heeled citizens, mostly retired, as a "Committee To Keep Our City What It Is."

2. Disband the local Chamber of Commerce.

3. Vote down all bond issues for schools, parks, street improvements, sewers, and water systems.

4. Avoid giving any operating funds to the city planning commission.

5. Advise merchants and property owners not to risk any money on major building improvements.

6. Warn all the motel, restaurant, and gas-station operators and taxi drivers not to say anything favorable about the city to any stranger.

7. Allow no travel expenses for city officials to attend conferences or institutes where they would be exposed to new ideas.

8. If there is a city manager, abolish the position or cut the salary.

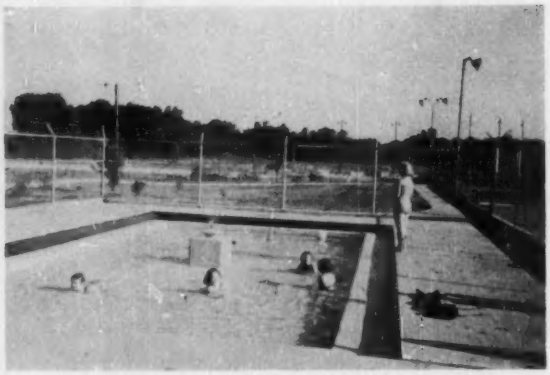
9. Get the local press to play up political feuds and other civic discords, and to put all such stories on the association wires.

10. Discourage any outsider thinking of opening a new business, by telling him what a poor business town this is.

•

While it is pointed out that one or more of these measures have been tried in various towns, in no place have all of them been used at one time. "If they were," concludes the article, "it would probably be necessary by the end of the first year to reorganize the Committee To Keep Our City What It Is, because a good many of the members would have moved away."

A tranquil scene at the shore of the park's lagoon.



The children's pool. There is also a large pool for adults.

West Frankfort Gets a Park System

By A. GORDON DODDS *

WEST FRANKFORT, ILL., home of the world's largest coal mine, is today reaping the benefits of one of the finest park developments that can be found anywhere among cities with less than 15,000 inhabitants. The splendid park facility with its broad recreational program is working wonders with the local young people, making them reluctant to leave town even when it is necessary to seek employment elsewhere.

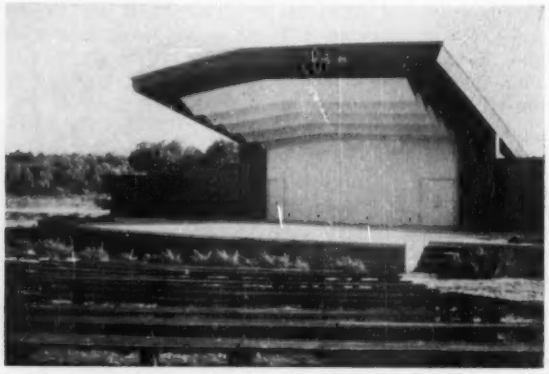
As World War II came to a close and building materials again became available, the civic leaders renewed their efforts to make West Frankfort a better place in which to live and rear a family. The Chamber of Commerce sought the advice of Professor Don Morgan, University of Illinois community consultant. He struck a responsive note when he suggested that West Frankfort needed to work on its recreational facilities. Following his suggestions, a community park district was formed with authority to develop parks and playgrounds and to raise funds by taxation. Mr. Morgan emphasized the wisdom of developing a master plan before doing any construction. It is much more economical to correct mistakes on paper than to try to gloss them over after they have been set in concrete. A swimming-pool design that looks like a fine asset to a park may be a nuisance if it is poorly designed or unfortunately located.

Scruggs & Hammond, planning consultants and landscape architects of Peoria, Ill., and Lexington, Ky., were engaged to produce the master plan and our Park Board buckled down to business. We planned our main park to serve the whole district, but we remembered to plan playgrounds and playfields near the homes of the

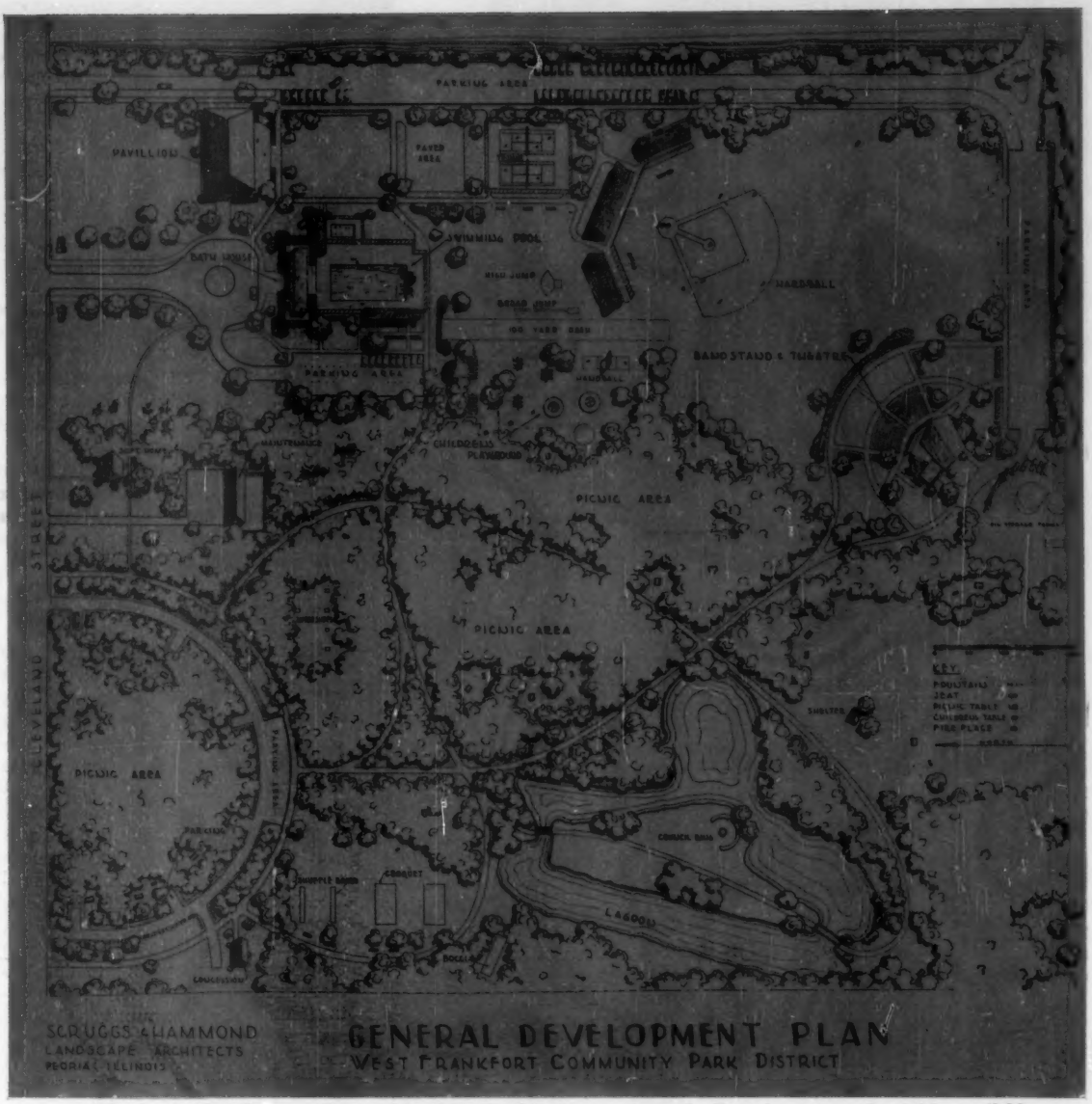
(*Continued on page* 96)

* Mr. Dodds was President of the Park Board during its original development program. He is now County Superintendent of Schools for Franklin County, Benton, Ill.

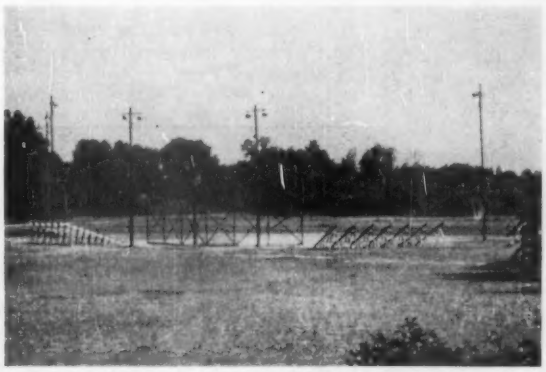
The park's maintenance and office building.



The amphitheater, for music and dramatic performances.

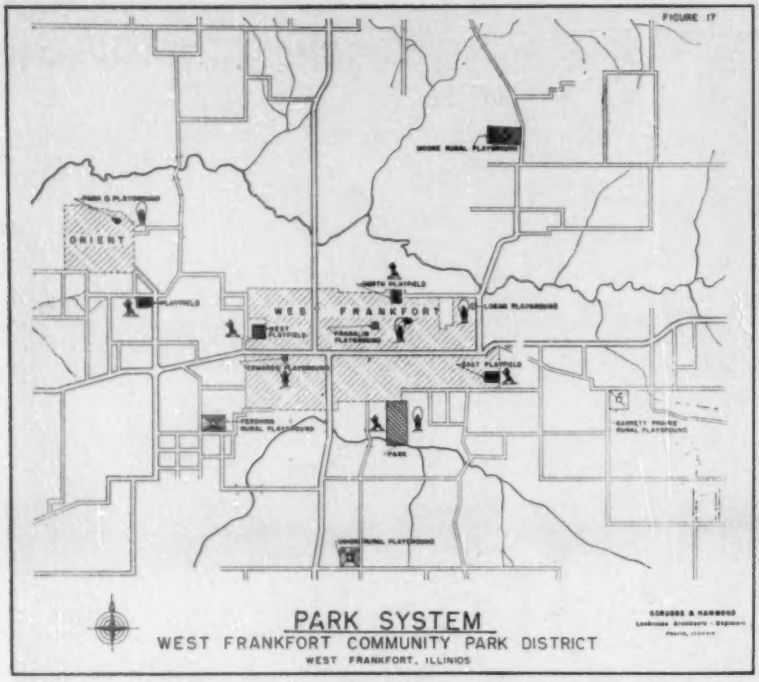


The General Development Plan used for West Frankfort's attractive park. Note the variety of activities available.



The ball diamond, which is floodlighted for night games.

The court where roque (a form of croquet) is played.



The complete park system developed by the West Frankfort Community Park District.

children. We built a ball diamond for the town of Orient, because that was what they asked for.

The master plan required a long-term financial program which called for an immediate bond issue of $350,000. When put to the vote of the people, the bond issue carried. It carried because the plan included specific items—swimming pool, picnic areas, outdoor theater, ball diamonds, etc.—which various segments of the population were demanding. We could show a well-thought-out plan for the entire area of the park district. The development would call for a tax increase of about $3 per year to the average home owner. Drawings and charts figured prominently in the campaign to acquaint the public with the program.

Swimming Facilities

With adequate financing assured, the board put itself to the task of getting a swimming pool built. Scruggs & Hammond associated with Architect Cletis Foley and Mechanical Engineer S. Alan Baird, both of Peoria, Ill., and again the board was looking at blueprints. The Illinois State Department of Public Health was consulted from the beginning on problems of sanitation.

Architect Foley came up with an inexpensive concrete-block wall in back of the pool walls to form a service tunnel which would give access to the underwater lights and utility lines. The board selected a rough Roman brick for the bathhouse walls and is well pleased with them. They make a distinctive-looking structure, and their rough surface makes them practically immune to defacing. The dressing rooms are open to the sky and are free of odors and dampness.

Low Admission Charge

The low admission charge of 18 cents for children and 36 cents for adults has thus far paid for the current operation and maintenance of the pool. Many of the older people seem to prefer a more subdued lighting of the pool at night. When the sun goes down we now use only the underwater lights, with one overhead light for the children's wading pool.

Activity in the pool always brings people to the spectator seats, which are arranged over the filter room on the west side. Health and safety have been given emphasis by the pool manager. This summer the American Red Cross used the pool for a life-saving school. The State Department of Public Health has consistently rated the pool among the best.

West Frankfort's many music lovers were thrilled to see a beautiful outdoor theater built in the south end of the park. The most recent theories on acoustics were put into practice, and a large overhead sounding-board type of shell instead of the older type of curved shell was constructed. The theater building is faced with Roman brick to match the bathhouse. Six nights a week during the summer months this facility is the setting for activity including band concerts, home-talent drama, square dancing, checker tournaments, variety shows, homemade movies, and other types of entertainment.

The lighted ball diamond is occupied day and night by the contestants of the various leagues that serve all ages. Tennis courts, children's play apparatus, croquet courts, flower gardens, walkways, and rustic bridges over a quiet lagoon—all have a place in the park and are appreciated by those who frequent them.

Twenty Acres of Woods

Most of a 20-acre wooded area is used for picnics. There are times when the one hundred tables are not enough. A system of lights connected by underground wires and an adequate water-fountain system add to the conveniences for park visitors.

As we look back over the history of the park development, we only regret that it was not started sooner so that more people could have benefited from it. West Frankfort's young people are taking a new pride in a community where they once said they could find nothing to do. We feel that this is definitely a stabilizing factor in a community which is aggressively rebuilding an economy too long dependent upon coal mines.

Dr. Lambert, the present Park Board President and an original park commissioner, says: "Not only are we furnishing the West Frankfort Park District people with some mighty fine recreation, but we are also being neighborly, and friends from many surrounding cities come first to view, and then to take part in our program."

The Annual Index

listing by subjects and by cities the articles and items published in THE AMERICAN CITY for the 12 issues for 1953 will be available without charge to subscribers for the magazine. Address requests to 470 Fourth Ave., New York 16, N. Y.

Turtle Tent. Made of Fiberglas and hollowed-out concrete, this turtle serves as playground climbing apparatus, tent, and slide for the tots.

Free Form. Meeting the challenge of the out-of-doors by resembling both rock and mountains, this piece of stone and concrete playground equipment features a slide and a cave, as well as climbing apparatus.

New Ideas for Playgrounds

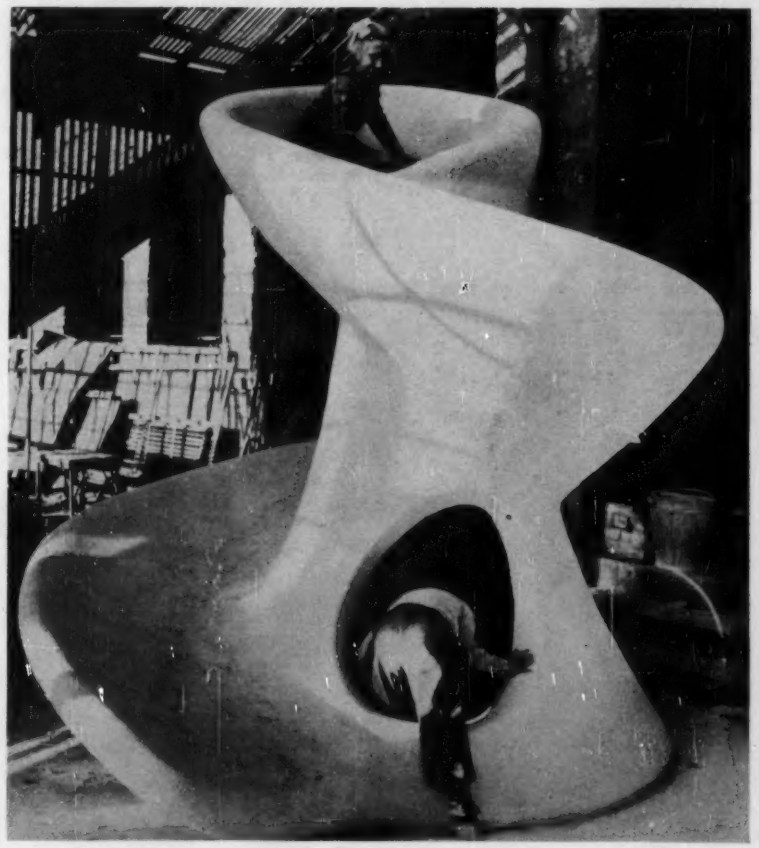
SHOWN HERE are some of the oddly shaped sculptured play equipment and playground models displayed at the National Recreation Congress, which was recently held in Philadelphia.

The exhibit, sponsored by Creative Playthings, Inc., of New York and Chicago, consisted of spirals and rocklike mountain forms, huge concrete spheres, slides and climbing arrangements, a Fiberglas turtle with hollowed sculptured shell to form tent and climbing steps for tiny tots, a metal climbing gym in the form of an amphitheater, and a see-saw in the shape of an airplane.

Playground Models

Also on display were models of extraordinary playgrounds sculptured by a distinguished group of international artists and architects. Veering from the traditional flat treatment of play areas, these playgrounds featured curved hollows serving play purposes in all seasons, play mountains and tunnels, trampolins, unusual wading pools and vari-shaped sand play areas.

The models, which were exhibited, are part of an effort to make play equipment more satisfying and exciting for children, in addition to providing opportunities for physical exercise.



Spiral Slide. This new type of playground equipment very effectively combines the values of cave, slide, and climbing gym, and adds to the beauty of landscaped areas.

A Unit backhoe gives an assist to workmen building a three-deck parking garage, at Fifth and Brady Streets, that will house 300 cars. Users will park their own cars.

"Working

By BURL A. PARKS
Plan Engineer
City Plan Commission
Davenport, Iowa

ALTHOUGH DAVENPORT has had a City Plan Commission for only eight years, efforts toward development of a compact, economically operated and well-grounded community have made much more progress here than in many cities where planning programs have had a longer history.

This is due to the fact that the City Council has been extremely cooperative in working with the Plan Commission, and also because the rather large Commission of 17 members includes representatives of such public bodies as the School Board, Park Board, Levee Commission, Real Estate Board, as well as engineers, an architect, various businessmen, the mayor, an alderman, and the city attorney. There is thus a virtual "interlocking directorate" of public bodies interested in planning.

While the Commission membership may seem large for a city of 80,000, attendance of Plan Commission mem-

Paving operation on North Brady Street, a four-lane highway, one of the main north-south arteries in Davenport, Iowa.

Together"— Davenport's Key to Progress

bers has averaged 80% at the semi-monthly meetings. In nearly eight years of operation, only one or two recommendations of the Plan Commission have been overruled by the Council.

It has always been the policy of the Commission to require full information on every problem, regardless of its magnitude. This information is gathered by the office force consisting of a plan engineer, assistant engineer, and office secretary. This information is presented at committee and Commission meetings. When the Commission reaches a decision, a thorough and complete report is rendered to the City Council, together with reasons relating to its decision.

Progress on Off-Street Parking

Considerable progress has been made in providing off-street parking facilities. A three-deck self-parking garage with 300-car capacity is under construction at 5th and Brady Streets. A new lot on the riverfront, in operation about three years, accommodates 296 cars. This particular lot was established in a riverfront park, just 1½ blocks from the business district. A sea wall was extended in order to provide parking space, and to replace the park area used. The sloping levee used in the old days for riverboat landing is being leveled and a sea wall built to provide 350 additional spaces. An area of half a square block, landward from and adjacent to the levee, is being acquired and will house approximately 230 cars. There will thus be a total of about 880 parking spaces on the riverfront, which is only one to one and one-half blocks from the most vital retail area. This, plus the parking garage, makes a total of 1,180 off-street parking spaces.

As a result of the Master Plan, prepared by the Plan Commission and adopted by the Council, the School Board has instituted a policy of acquiring sites for future schools before the land is developed, which eliminates costly condemnation and assures the School Board of sites when they are needed. This policy has also been followed by the Park Board. Several playground sites have been acquired throughout the city, and 120 acres of a recommended 280 acres for a new park have been acquired.

Riverfront Development Controlled

Davenport is a special charter city, which allows the city to control the riverfront. This control is exercised by the Davenport Levee Improvement Commission. The primary function of this Commission is to develop the riverfront from funds derived from the lease of levee property. The plans of this Commission have been coordinated with the Master Plan. In the past, the Commission has built several miles of sea wall along the levee, which enables it to reclaim and develop land. The riverfront now boasts of one of the finest baseball stadiums in the State of Iowa and a beautiful park and boating facilities within a stone's throw of the business district. This was all accomplished with absolutely no tax money involved. The Levee Commis-

Part of the sloping levee parking lot. LeClaire off-street parking lot, in the background, is to be surfaced and metered.

A Galion steel-tired roller puts the finishing touches on a levee area developed for off-street parking. Levee Commission cooperation made the area possible.

sion is now undertaking the development of an area of about 60 acres into industrial sites and additional park and recreational facilities.

A close relationship between the Plan Commission and the Levee Commission is maintained, due to the fact that the chairman of the Plan Commission is also secretary of the Levee Commission, and the plan engineer doubles as executive secretary of the Levee Commission. All administrative work of both Commissions is done in the same office, thus effecting an economy of operation.

Careful Subdivision Review

Probably one of the most underrated functions of the Commission is its study and approval of subdivisions. All subdivisions are required to conform to the Subdivision and Zoning Ordinances. Wherever Subdivisions are platted along existing streets that are to be widened, the Commission requires that the necessary land be dedicated so that when the street is widened, the necessary right-of-way will be owned by the city. Since 1946 many miles of streets have been widened by this method and several miles of major streets have been dedicated. All subdivisions are inspected thoroughly by the Plan Engineer, both on paper and by an actual visit to the site. The findings of the engineer are presented along with the plat at the Subdivision Committee meeting, where all major problems are discussed.

Before final approval of any subdivision, the developer is required to make all improvements or post a surety bond guaranteeing completion of the improvements within two years after final approval. Improvements include such things as paved streets, sewers, water, and grading. This method provides the prospective homeowner with a home free of any possible paving or utility assessments and provides a neater and less expensive addition to the city.

The requirement of these improvements also eliminates premature land subdivision to the extent that land will not be subdivided unless there is a demand for the lots. In the past, the city had found itself faced with costly paving and sewer problems in prematurely subdivided additions.

Reports to Council

Twice a year, the Plan Commission is host to the Mayor and City Council at a dinner meeting. The Commission makes a complete report of activities and progress made since the last meeting. A general discussion follows, at which time all problems of both bodies are discussed freely. This meeting is of prime importance, since it brings all problems to the fore and clears the air of any possible misunderstandings which may exist.

The Commission also provides the City Council with a 5-year public works program, recommending priorities in public improvements and outlining a method of financing each project. This report is brought up to date at regular intervals.

The Commission endeavors to maintain a high standard of integrity on all matters, and not to be swayed by personal problems or interests. The planning firm of Harland Bartholomew and Associates, who directed the preparation of the Master Plan, is retained on a consulting basis. This affords the Commission with a source of qualified consultation in times of need and keeps planning operations in the right channels.

Since the Plan Commission was formed in 1945, Davenport has been a "planning conscious" city. The Commission was set up with 15 members, plus the mayor and one alderman as ex-officio members. The city attorney and superintendent of public works are automatic members.

The Zoning Commission and Zoning Board of Appeals are made up of members or past members of the Plan Commission, but operates separately from the Commission. Zoning matters of primary importance, however, are always referred to the Plan Commission for study and report.

This list of the Commission members and their business or professional place in the community shows the varied experience Davenport Plan Commissioners bring to their work:

Chairman: W. A. Priester, president, Priester Construction Co. & Secretary Levee Commission.

Vice Chairman: H. M. Nabstedt, retired hydraulics engineer; Secretary, Mel Foster, real estate, insurance and bonds: Ralph C. Graham, superintendent of public works; C. E. Wittenmeyer, city attorney; A. C. Eckmann, manager department store and member of Park Board; Richard LeBuhn, insurance and president of School Board; J. J. VonBockern, superintendent of D.R.I. & N.W. R.R. Co.; F. C. Codd, retired minister; E. L. Ruhl, real estate and insurance; Grant Barber, former alderman; Walter Kruse, architect; Robert Heysinger, electrical contractor; C. E. Shrout, automobile salesman; Ben Comenitz, wholesaler; A. R. Kroppach, mayor, and Julius Geertz, alderman at large—ex-officio.

Work gets under way with the asphalt test sections that will be reinforced with welded wire fabric. The "sleds" beneath the paver will keep the wire in place.

Wire-Reinforced Asphalt Paving

— *A Test Project*

WASHINGTON, D. C., is giving welded wire fabric an opportunity to demonstrate its value in asphaltic-concrete pavement. A test project, set up by Harold F. Clemmer, materials engineer for the District of Columbia Highway Department, will determine the effectiveness of the fabric in controlling crack formation in the bituminous surfacing of an old portland-cement concrete pavement.

Approximately 3,000 square yards of 16th Street NW., near Alaska Avenue, were paved with the wire mesh and bituminous combination. The test paving was done in sections that were alternated with nonreinforced sections of plain asphaltic concrete for comparison and observation.

Prior to the actual paving, D. C. highway engineers made photographic studies of crack formations in the existing concrete pavement as an aid to later study of the new surface, both with and without wire reinforcement.

The fabric was made of 10-gauge, cold-drawn steel wire, welded in flat sheets, 11½ by 7 feet. Longitudinal wires were spaced at 6 inches and transverse wires at a closer 3 inches. The fabric sheets were laid directly on the existing pavement with transverse overlaps of 6 inches, and tied with wire in several places across the pavement width to prevent curling and slipping as the truck and paver passed along. The 11½-foot-width of mesh provided a 3-inch clearance from both edges of the 12-foot binder course of asphaltic concrete.

To prevent the fabric from "hanging up" in the paver, the transverse wires of the mesh were faced down so that the spreader, in effect, slid along the longitudinal wires. Passage was further eased by lapping the fabric sheets away from the paver as shingles are lapped from the ridge pole of a roof.

Barber-Greene Does the Trick

A Barber-Greene 10-foot paver with 1-foot extensions on both sides was used for the resurfacing. To keep the welded wire fabric flat on the pavement and in proper placement, six sleds were attached to the spreader. These sleds were simple 13-inch, steel-curbing forms suspended open side up from a steel bar along the front of the Barber-Greene. Four of the sleds were placed between the crawler tracks with a single sled on each side.

The District of Columbia test is one of a series that is being conducted about the country. First applications of wire fabric were made in 1946 in Liberty County, Texas, and subsequent inspections revealed that these reinforced asphaltic concrete pavements were still in good condition, while nonreinforced sections of the same highway (U. S. 90) have had to be resurfaced.

Other trial applications of welded wire fabric have been made in Minnesota, Illinois, and Indiana.

The transverse overlaps of the fabric sheets are tied with wire to prevent curling.

A Bucyrus-Erie 1¾-yard back hoe works cautiously in the trench where the new trunk sewer is being laid. A gas tank, just out of range, is on the left.

Settling tanks are located on either side of the sludge-pumping building. In the background are the chlorine-contact chamber and the ton containers of chlorine.

The Sewage Plant Came First

City cleans up harbor pollution by first building its treatment plant and later constructing the needed interceptor trunk sewers

By JOSEPH A. PERRY, *Superintendent of Sewage Treatment, Fall River, Mass.*

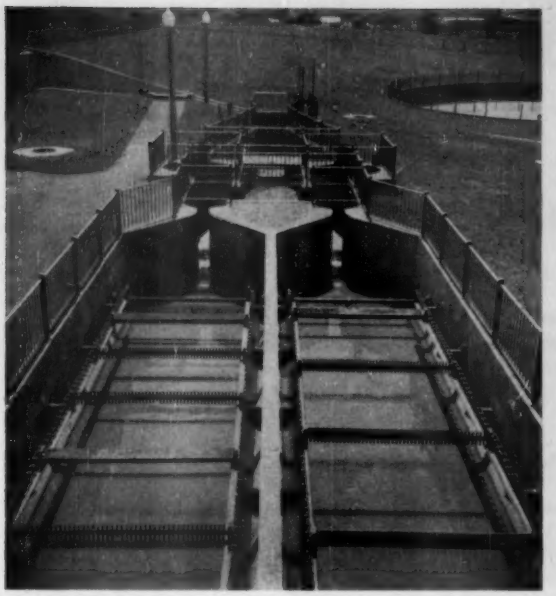
LIKE THE ENGINEER who first built a bridge and then brought a river under it, Fall River has done the same sort of thing with its sewerage program. Four years ago, this coastal city of 112,000 completed construction of a new treatment plant and a short section of trunk sewer.

Since then, the city has extended this trunk sewer, intercepting each of the outfall sewers as construction proceeds northerly. The plant, with a capacity of 20 mgd (million gallons daily), treats about two-thirds of the sewage contributed by the city. The load is steadily increasing as the trunk sewer construction program continues.

The plant receives a sewage containing wastes that are relatively difficult to treat. Fall River has a number of textile mills that contribute colored industrial wastes. Sewage is purified by a practical, straightforward design; it presents no health hazard nor odor nuisance.

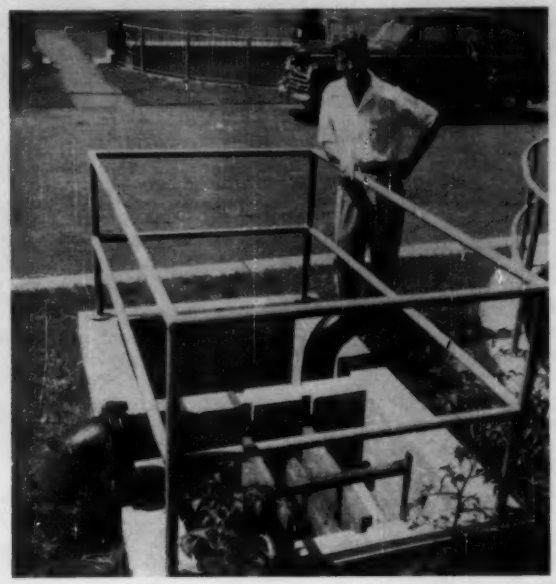
The treatment is designed around the use of primary settling and post-chlorination. The sludge is digested and incinerated after it has been elutriated and dewatered on vacuum filters. In this way, the plant provides a positive sanitary disposal of all of the removed polluting material.

The plant site was skillfully located to eliminate the cost of pumping. Sewage flows into the plant by gravity and does not have to be pumped at any time during treatment. Only



Twin grit chambers continuously remove grit from sewage.

Superintendent of Sewage Treatment Joseph A. Perry stands above two-stage mixing chamber used for elutriation of sludge.



Sewage enters the plant at this receiving chamber. Occupants of nearby homes suffer no offense from the plant.

Elutriation tank thickeners (foreground) lie on either side of the path leading to the digesters. Note the floating cover, shell of an incomplete tank, and the dredge which are in the background.

the sludge from the settling tanks requires pumping.

The use of this site required a good deal of confidence in the ability of the plant to perform without creating an odor nuisance, for homes are located within 100 feet of the plant site and in full view of all operating units. The plant personnel goes to great lengths to keep the grounds and buildings in park-like condition, which undoubtedly contributes to the lack of complaints by neighbors.

The sewage enters the plant at a diversion channel that permits high storm flows and the diluted sewage to overflow by means of a specially designed storm-flow bypass into the chlorine-contact tank. Here the sewage is chlorinated before being discharged.

This diversion channel directs the normal flow through coarse racks to a pair of mechanically cleaned grit chambers. These units are equipped with Chain Belt grit collectors that remove the grit from the channels. The sewage then passes through a pair of Chicago comminutors and a Parshall flume where the flow is measured.

The grit-free sewage then passes to a pair of Walker Process settling basins 90 feet in diameter. These provide a detention period of 1½ hours at the design flow before releasing the sewage to the chlorine-contact chamber.

The plant uses Builders-Providence

Chlorinizers to supply post-chlorination. The facilities are designed to handle chlorine in ton containers. The contact chamber provides 16 minutes of detention to allow the chlorine to complete sterilization.

The chlorinated effluent then enters the harbor through an outfall sewer that has recently been extended from 200 feet to 900 feet in length. The outlet is located a safe distance from the proposed ship channel and is deep enough so that the treated sewage can be effectively dispersed in the bay.

Sludge Elutriation

The sanitary disposal of the sludge from the settling tanks was a point of major attention in the plant design. The withdrawal of the sludge from the settling tanks is controlled by telescoping valves. Two Carter plunger-type sludge pumps rated at 125 and 175 gpm (gallons per minute) transfer the sludge to the digestion tanks.

Positive acting ACF lubricated plug valves control the flow of sludge in the lines leading to the digesters. There are four digesters, equipped with PFT floating covers; two are secondary digesters, one is equipped with a PFT gas collector, and the other is an open unit. A pair of PFT external heat exchangers brings the sludge to an optimum temperature for good digestion.

The digested sludge is elutriated before it is dewatered. The thickening tanks are 30 feet in diameter and have Carter sludge-removal mechanisms. The primary tank is 7 feet deep; the secondary, 9 feet. The elutriation system is designed to wash away certain impurities that make the dewatering of the sludge on the vacuum filters difficult.

Elutriation takes place in two stages and follows the "countercurrent" principle. Sludge first enters the primary portion of the mixing well where it is mixed with the effluent from the secondary tank in a ratio of one part of sludge to three parts of effluent from the secondary-stage mixing tank. Then the mixture proceeds to the primary-thickening tank where the sludge separates from the liquid. This sludge is then pumped to the secondary portion of the mixing well where it is mixed with plain water in the ratio of one part of sludge to three parts of water. This final mixture then goes to the final thickening tank where the sludge again is allowed to settle out.

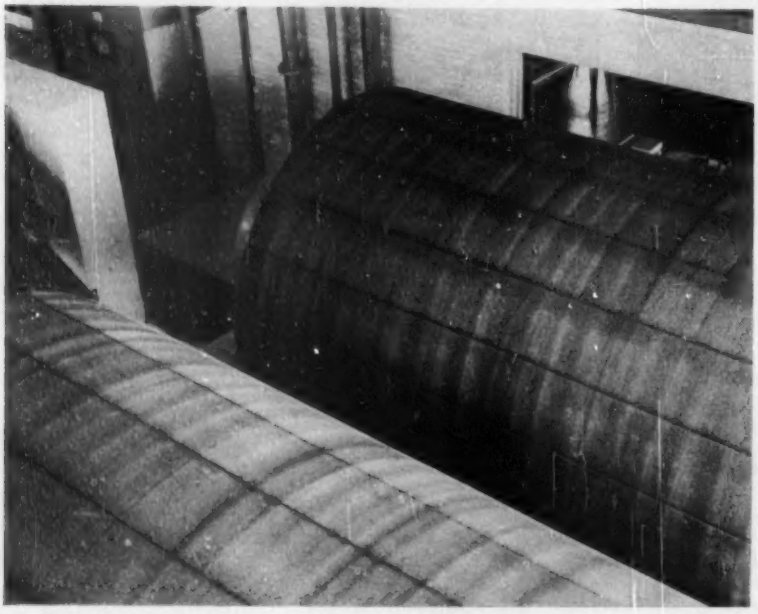
Incinerator

The sludge is then pumped into a sludge well, and lifted by bucket elevator to a mixing tank where ferric chloride is introduced. This conditioned sludge then flows to the Eimco vacuum filters where it is dewatered. Each filter is 8 feet in diameter and 12 feet long, providing a surface area of 300 square feet. The dewatered sludge is discharged onto a conveyor belt that delivers it to a Nichols multiple-hearth incinerator. The incinerator is supplied with six hearths: two for drying, two for burning, and two for cooling the burned residue. The incinerator uses either oil or gas from the plant digesters for fuel and can use a combination of both.

Incineration was considered the easiest and most positive method of completely disposing of the dewatered sludge. A color code for pipelines and equipment has recently been adopted. Each color identifies the material handled by the various pipelines. This was incorporated as a safety feature, as well as for convenience of operation.

The sewage-treatment plant and intercepting sewer were designed by Hayden, Harding & Buchanan, consulting engineers of Boston, Mass. The plant was constructed by Grande-Wyner of Malden, Mass.; the intercepting sewer is being constructed by Pacella Bros., Inc., of Dedham, Mass.

The plant operates under the direction of the author and under the general direction of Commissioner of Public Works Thomas J. Logan.



The conditioned sludge flows to two Eimco vacuum filters, where it is dewatered.

Louis Brownlow and Edward H. Bennett Get 1953 ASPO Awards

THE ANNUAL AWARDS of the American Society of Planning Officials to honor persons who have made an outstanding contribution to planning have gone for 1953 to Louis Brownlow and Edward H. Bennett.

The citations point out that, among other achievements, Mr. Brownlow deserves much of the credit for the birth of ASPO in 1934; and that Mr. Bennett's service to city planning dates back to the San Francisco Plan of 1905, and the Plan of Chicago of 1909.

Your City and Mine

"Your City and Mine" is the title of a collected series of articles by Robert L. Price, city manager of Marinette, Wis., which were published weekly in the *Marinette Eagle Star*, the city's daily newspaper.

The set of duplicated articles report in brief, newsy style the manager's observations regarding the community. They describe the improvements that are needed and steps toward accomplishing them taken by the city government, civic agencies, and private citizens.

Long Beach Gets An Animal Shelter

By JAMES BIBB
Director of Animal Regulation
Long Beach, Calif.

Inside view of the kennels. Note germicidal lamps and intercom loudspeaker.

The public is served at this counter. Dog licenses are also sold here.

OCCUPIED in JULY 1953, the new modern animal shelter at Long Beach, Calif., costing $123,000, has met all the expectations of its designers for comfortable and hygienic care of animals housed in the municipal structure.

After the old shelter was condemned as unfit for repair or further use, the writer was given the go-ahead signal by city authorities to select a new location and proceed with the design of a modern structure. The city was fortunate in owning a large parcel of land which was properly zoned and which was finally selected for the city because it is situated almost in the center of population on a good highway. The land was also large enough to allow for expansion of shelter facilities in this rapidly growing area.

Following are some of the features of the building, which were evolved after careful inspection of animal shelters elsewhere, and consideration of animal-care needs in summer as well as winter. The two kennel buildings are each 104 feet in length with 40 kennels in one

This is the administration building of Long Beach's new animal shelter, which cost $123,000.

building and 44 in the other. A comfortable pup room was provided, with special cages that accommodate 50 pups. A special cat room comfortably houses 75 cats.

A boiler generates steam for the steam-cleaning of the kennels and also provides heat for the radiant-heating system, which protects the dogs against cold and distemper during the cool, wet winter months. The inside runs also have circulating heat under the concrete slab, all automatic and thermostatically controlled. When steam-cleaning is in progress, the animals are protected from harm by being required to go through a sliding steel door from the inside runs to the outside runs. The steam kills germs and dispels offensive odors. Two double rows of germicidal lamps in each kennel building, and in the pup, cat, and dispensary rooms, also protect the animals from germs.

The food-preparation room is large enough to store a six-months' supply of food, with equipment consisting of a deep freeze, a double sink, and four-burner stove for cooking and

3 Types of Underwater Pipe Crossings

By DEWEY JOHNSON
Research Engineer
Cast Iron Pipe Research Association
Chicago, Ill.

FORT LAUDERDALE, FLA., is completing a large expansion program for the Department of Water that requires some 60 miles of cast-iron mains and includes many river crossings. Wherever possible these mains were attached to the sides of bridges. In some cases, the bridges contained movable spans, either of the jackknife or the swing type, making it necessary to lay the mains in trenches on the bottom of the rivers, canals, and other waterways.

During the past construction season, six submarine crossings were installed calling for ball-and-socket joints on cast-iron pipe. Three pipes are 16 inches in diameter, and one each is 20, 24, and 30 inches.

The 24-inch and two of the 16-inch-diameter crossings were installed by an unusual method (see illustration). Completely assembled on shore, the ball joints of the crossings were bent to the proper shape to fit the bottom of the river. The pipe was then attached to a long I-beam constructed of several standard I-beams that had been welded together. The pipe was suspended from the beams by short lengths of wire cable, cut to lengths that would maintain the proper amount of bend in each of the joints. The assembly was about 150 feet in length.

The long I-beam was then raised by two large cranes and the whole assembly gently lowered into the trench that had been prepared. The wire cables were removed and the river-crossing section connected to the balance of the line.

The pipe was cast in 12-foot lengths and provided with ball-and-socket joints, permitting a large degree of deflection. The joints were secured by caulked-lead material. At the end of the crossing, two lugged 22½° bends were used with two lengths of lugged pipe, one lugged ell, and one lugged pipe in each river bank.

The 30-inch, cast-iron, river-crossing pipe was too heavy to handle as a completely assembled unit so it was installed in three sections of pipe at a time. The end of the pipe from the

Prefabricated pipe crossings are practical when a stream is not too wide. Completely assembled on shore, the pipe is gently lowered to the prepared trench.

Ball-and-socket pipe joints are flexible enough to meet river-crossing requirements.

preparing the food for the animals.

The sound-proofed, fluorescent-lighted administration building, with off-street parking for 35 cars, contains a spacious all-glass reception room adjoining the general office, as well as the Director's office, squad room, locker room, small kitchen, toilet and shower facilities, including public comfort stations for visitors. All offices have radiant heating, and the building is connected with the two kennel structures by an intercommunication system which has been found a labor-saving device.

The city's animal-shelter ordinance consolidates all phases of animal regulation work, which consists of picking up stray, dead, or injured dogs, cats, and other animals in the streets, quarantining of animals, investigation of alleged cruelty cases, handling of all sales and redemptions, and the sale of dog licenses.

The animal shelter never closes its doors to the public. The trucks are all radio-equipped, which adds greatly to the efficiency of the division, especially when handling emergency calls.

Variety paid off when the Water Department built six submarine crossings in Fort Lauderdale, Fla.

preceding section of main was held above the water surface while the lead joints were being poured.

All of the joints on all of the water crossings were recaulked by a diver after the mains were in place on the bottom of the river. Tests for leaks were then made with water pressure at 125 pounds per square inch.

The 20-inch water crossing and one of the 16-inch crossings were assembled ashore on skids; four oil barrels per length were attached with thin metal bands. The pipe and barrels were then pulled down by the skids and were floated into position over the trench that had been prepared across the bottom of the river.

The barrels were released, the pipe was sunk, and the trench backfilled. The underwater trenches were sometimes excavated in fine sand or muck, in which case a large amount of material had to be removed. Sometimes they were dug in coral rock which required a smaller trench, but considerably more labor and tools.

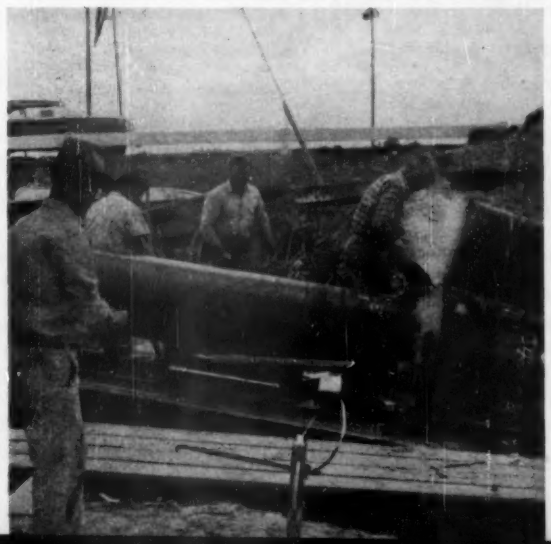
Use Made of Oil Barrels

The crossing of the Intercoastal Waterway which was out of service for 17 hours during the installation, had to be chiseled out of coral rock. The soft stone was scooped up and saved for use as backfill material to cover the main and protect it from boat anchors. This particular water crossing had to be placed 22 feet below water surface and was installed in two long sections.

The first section was floated into position by the use of barrels. The following section was floated out to the first section. By means of two floating cranes, the ends were picked up out of the water and laid on a scow. The two ends were pulled together by turnbuckets so that the lead joint could be poured and caulked. The main was then lowered into the water and the floating barrels cut away with heavy bolt cutters. The last few barrels had to be removed with the aid of divers.

The adaptation of these three methods to the laying of submarine pipelines proved effective in the expansion program that the Fort Lauderdale Department of Water had undertaken. Service on the waterways was not drastically interrupted and the job was completed very quickly.

Pipe joints are poured on the river bank, and all are later recaulked by a diver after they are in place at the river bottom.



For wide crossings, pipe is floated into position with the aid of steel drums, which are later cut away with bolt cutters.

Some Do's and Don'ts *for Planning Commissions*

By EVERETT B. MANSUR
Member, City Planning Commission, San Gabriel, Calif.
Planning Consultant for Cities and Counties in California.

THE FOLLOWING "do's" and "don'ts," although prepared for planning-commission members, contain much that is applicable to members of other municipal boards and commissions. They are based on the author's experience as a staff member and as an official of several city, county, state, and federal agencies, primarily in the California area.

Some of the positive recommendations follow:

Hold Regular, Well-Prepared Meetings

The California Planning Law requires that the commission shall hold at least one regular meeting in each month. A carefully prepared agenda is essential to enable the commission to dispose of a large amount of work in a short space of time. Copies of the agenda should be available in advance so that members can insert ideas at the proper time. There should be a distribution of discussion among all members, rather than domination by the chairman or a minority. The minutes of all meetings should be well kept; give all important facts; the substance of discussions; and accurate wording of all acts of the commission. If copies of the minutes are distributed to the members before the next meeting, time can be saved in the reading and approval of minutes.

Learn Planning

It is taken for granted that a planning-commission member is familiar with his community. One of the first duties of a new planning commissioner is to learn what planning is. He should build up a library of planning books, publications, and reports of other commissions. He should read and study these, at least to the extent of knowing where to look for needed information. He should learn firsthand what others are doing in the field of planning. This can be done by visiting other commissions and, especially, by attending conferences and meetings on planning. The exchange of ideas by personal contact is one of the most valuable methods spreading the gospel of planning, or any other subject.

Section 65433 of the California Planning Law states:

> The members of a commission, including advisory members of its staff, shall inform themselves on matters affecting the functions and duties of the commission. For that purpose, and when authorized, such members may attend planning conferences, meetings of planning executives, or hearings on planning legislation on matters affecting all or part of the master plan. The reasonable traveling expenses incidental to such attendances shall be charged upon the funds allocated to the commission or the department. The commission or the department may, when authorized, pay dues for membership in organizations engaged in the study of planning.

Determine Community Needs

Determine the needs and desires of the citizens concerning the future. This can be done through contact with civic and professional organizations, service clubs, women's clubs, churches, labor groups, and by sample surveys. School children can be useful for this purpose as they reflect the ideas of their parents, and add modern thoughts of their own. Collect all available material on the community to be planned, including economic data, population trends, maps, charts, and reports made by government agencies and private organizations. This is important so that time and money will not be wasted in duplicating work already done.

Adopt Master Plan

The master plan may comprise any, all, or any combination of the following:

- Conservation plan
- Land use plan
- Recreation plan
- Streets and highways plan
- Transportation plan
- Transit plan
- Public services and facilities plan
- Public buildings plan
- Community design plan
- Housing plan
- Redevelopment plan

Pick out the subjects that are the most vital to your area, and establish a priority of the order in which they should be undertaken.

Give Staff Authority

Except in a small community, with a limited budget and technical staff, the commission members should not concern themselves to great extent in the technical details of planning. If there is a staff, these details should be left to the staff. The commission should set the policy, and

give the department head authority. Don't tie his hands. If he doesn't carry out the policies — get a new man.

Pay Adequate Salaries

With an ambitious planning program, a technical staff is necessary. In order to obtain qualified personnel, adequate compensation must be paid. Some planning commissions have found it nearly impossible, at the present time, to secure competent planners at existing salary levels. Because of the scarcity of planners, it is desirable that the staff of a county planning commission be adequate enough so that it can give aid to the smaller cities within the county in their planning work. This can be done gratis, or for the actual cost of time and material, or for a specified sum. A contract may be entered into between the county and city for this work. If a planning staff is not obtainable, the cooperation of other departments should be secured to do drafting and clerical work. Students from the public schools can be used to aid the development of a planning program. In making a traffic count or a land-use survey, students will take an interest in the work, are apt to be more accurate and painstaking than many adults, and will also carry interest in planning home to their parents.

Continue Consultant Services

A planning consultant can help establish a program and get it started. Often a small staff or the volunteer work of the commission members, with aid from other departments, can carry out this program with very little expense. The services of the consultant should be continued. There have been too many examples of a beautiful report prepared by an outside expert gathering dust in the archives because there was no continual effort to carry out the recommendations.

Maintain Liaison with Official Agencies

The commission, both as individuals, and as a body, should maintain friendly relations with all other commissions and departments of the city or county, the legislative body, and other governmental agencies. This duty should not be left to the technical director, engineer, or secretary. When a planning commission is new or starting out on an expanded program, there may be jealousy on the part of other departments which claim to be doing the work of a planning commission, and are afraid of duplications, over-lapping, or loss of authority.

The planning commission is an advisory and research agency for the legislative body. It should coordinate the work of all other departments. It can act as a clearing house. Encourage all departments to funnel their ideas to you—then be sure to give them credit for these ideas.

Some More Specific "'Do's"

Attend all meetings of the commission, and be on time.

Plan for future problems before they become problems. Too much planning in the past has been corrective planning.

Encourage favorable publicity regarding the activity of your commission. Channel all publicity through one source to avoid confusion or contradiction.

As a planning leader, you should sell planning to all citizens.

Review your program from time to time. Changes come rapidly. What you thought was good yesterday may not be good today.

It is your responsibility to see new problems as they arise, and to recommend new legislation, if necessary, to solve them.

Inspire community confidence in the program through competence in your work.

Provide continuity of experienced leadership so that changes in the staff, or of elected officials, will not weaken the effect of the program.

Secure an adequate budget for the operation of your planning department.

Submit annual reports to the legislative body promptly. There is nothing so dead as an obsolete report.

After plans are made and adopted by the commission, your work is not completed. These plans must be carried out. A careful follow-up must be made to see that the legislative body, or other agency concerned, executes these plans. A plan for a community is never finished, but is a continuing study of the trends of growth and development.

"Don'ts" for Commissioners

Don't bog down in the administration of a zoning ordinance. If you do, you will accomplish very little else.

Don't waste your time and the time of other members by long discussions, irrelevant to the subject under consideration.

Don't argue with the public during commission meetings, but listen to both sides of a proposition.

Don't give horseback opinions on matters concerning the whole commission. Decisions should not be made under pressure but after careful deliberation.

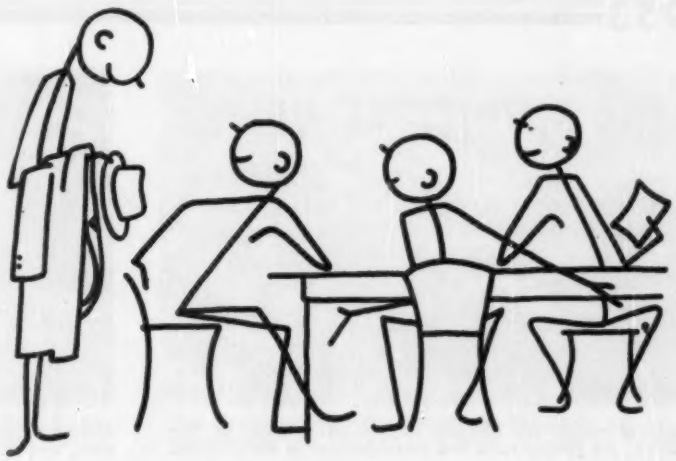
Don't use the board room as your private office, or have your own personal telephone calls and visitors come during commission meetings.

Don't commit yourself on a controversial matter until you have heard both sides.

Don't bow to pressure or fast talk.

Conclusion

It takes time to prepare a comprehensive planning program; however, eventually the commission must prove to the legislative body, other governmental agencies, taxpayers, voters, and the public at large, that valuable, necessary work is being accomplished; and that the cost of this planning is insignificant to the value of the results.



MPR

The City Tells Its Story

Edited by PAN DODD WHEELER
Executive Director, Government Public Relations Association

Trends in Municipal Public Relations for the Year Ahead

PUBLIC RELATIONS in some pace-setting municipalities during the past year point up trends in MPR which, we predict, will be taken up, adapted, and used by other cities in 1954. These activities indicate a broadening of the MPR concept.

- We predict that, in the year just beginning, city employees will be in the PR spotlight. Cities will pay attention to training employees to understand and to perform their PR function.
- We predict that more cities will capitalize on the glamor of television and will take advantage of public service time that is available to cities.
- We predict that more cities will pay attention to new citizens—newcomers to the community and young people growing up to citizenship.
- We predict that cities will concentrate on giving specific answers to citizen questions and needs in between annual report time—to satisfy where interest is already high and to stimulate interest on occasion.

Manager C. E. Perkins of Glendale, Calif., is enthusiastic over the public relations course which his city employees have taken. The course has been conducted twice to date and, he says, will be used again when needed. Mr. Perkins says that the course has given city employees a basic understanding of human relations and a new pride in the job they are doing.

Ovid Blix, Milwaukee official who provided these pages with the story of his city's "charm school," has found that the PR course stimulates better public relations for the city, because employees know what to do and how to handle themselves in dealing with the public. MPR courses, we believe, will be given in many more cities, on working time, in the coming year.

Newsletters for City Employees

Other indications of the attention being paid to city employees are newsletters being published for them. These not only contain job opportunities, training available, benefits, responsibilities, employee relations items, but also information about the over-all activity of the city to make each employee feel a part of the whole operation that is city government. Austin, Texas, and Norfolk, Va., are two cities which now publish such employee newsletters.

More Cities on TV

As Thad Brown, representative of the National Association of Radio and Television Broadcasters (NARTB), told conferees at the November National Municipal League meeting in Richmond, the "limiting factor" in city use of TV to educate citizens are regulations in some cities forbidding TV broadcasting of municipal activities and the lack of "know-how" in producing a city government show. He cited the use made of public service TV time by the City of Philadelphia—which has a public information department to handle the TV shows—as "magnificent." The Philadelphia shows are telling that city's story in dramatic and entertaining fashion to thousands of people every week on local TV stations.

Kansas City's weekly TV show has brought what staff member Mrs. Harold Marshall describes as "response beyond our imagination when we planned the city hall program." And Toledo's presentation of the city's

1953

MUNICIPAL NEWS
A MONTHLY REVIEW OF DEPARTMENT ACTIVITIES, COUNCIL ACTION, ADMINISTRATIVE REGULATIONS AND PUBLIC RELATIONS
PUBLISHED BY AND FOR NORFOLK CIVIL SERVICE EMPLOYEES
NUMBER 2, VOLUME I — JULY, 1953 — NORFOLK, VIRGINIA
Policewomen to Handle Traffic Jams
Mosquito Beware! Men Attacking
New Civic Center Under Council Study

Employee newsletters, like this one for city workers in Norfolk, Va., are getting more and more popular in MPR circles.

Mayors George R. Dempster, of Knoxville; Ben West, of Nashville, and P. R. Olgiati, of Chattanooga, "report" via TV.

business on WSPD-TV has been widely copied and admired.

Television broadcasters are, in general, willing to provide city officials free time for presentation of a municipal program. But these broadcasters know that only if such a program is "top quality" will viewers stay tuned to the channel. This means the city will have to spend time, money, and energy to make the "free" time profitable to the city, the citizen, and the service-minded station manager.

Television is still comparatively new to most American communities. We predict that more city governments will utilize it as a dramatic and effective way to tell their story.

Putting Out the Welcome Mat

Reaching people when they are new to the community—newcomers or young people who will be future citizens—gives the city a chance to win new and helpful friends. A Shorewood, Ill., resident says she was "never interested in city government until I moved here. I became interested and, really, excited the very first day we lived in Shorewood." The contact was a "welcome booklet" financed by local businessmen, prepared by city officials and a citizens' committee, and distributed by the "Welcome Wagon." Former Shorewood manager Mark E. Keane (now of Oak Park, Ill.), wrote us about the booklet. Borough manager Robert H. McGregor of Whitehall, Pa., writes that his community has just published a similar welcome booklet.

Richmond's mayor, Dr. Edward E. Haddock, thinks that future citizens are the best hope for his and other cities. So he invites specific high school groups to city council meetings to watch the city government in operation. He considers this a "realistic" education of future citizens for Richmond, Va.

There will be more annual reports issued in 1954 by cities. Increasingly citizens expect and want such reports and city officials are recognizing them as one requirement of the progressive local government. But many officials understand that a one-time-a-year report cannot be depended on to do the total information job.

Knoxville, Tenn., issued a special two-color booklet to citizens to explain a new sewer-service charge which will finance a multimillion-dollar disposal plant. Hayward, Calif., has published specific information about city council meetings—where and when held, seating arrangement for council members, citizenship participation, and phone numbers to call about municipal services.

Junction City, Kans., published, this October, a "Guide for Citizens," describing the organization and function of various city departments. And Glencoe, Ill., answered questions citizens were asking about garbage disposal in a concise, carefully and sensibly written tablet-type brochure. The idea behind all these "reports" was to fill a citizen-need for specific information on a timely matter.

The year just beginning will certainly see these developments—each of them tending to pull citizens back into the government nearest them: the city government. MPR is dynamic . . . so, these activities mentioned will be molded, changed, suited to specific communities. We predict that they will help more city officials tell more citizens the cities' story in 1954.

Mayor's Committee Helps Minimize Livonia's Growing Pains

A 51-MEMBER Mayor's Advisory Committee is helping Livonia, Mich., to minimize the natural growing pains of a young industrial city. The Committee was first appointed in 1951 by Mayor Jesse Ziegler to study the policies and plans of the city government and offer suggestions.

Standing committees within the group have the various phases of city government under continual study. The heads of the city departments and commissions often appear before the Committee to explain their program.

Last year the Committee exhaustively studied, and then approved the city's highly regarded zoning ordinance, which the people accepted by a large majority vote. A Committee suggestion for acquisition of land for parks has prompted the City Planning Commission to work on a comprehensive plan of combined park and school sites throughout the entire city.

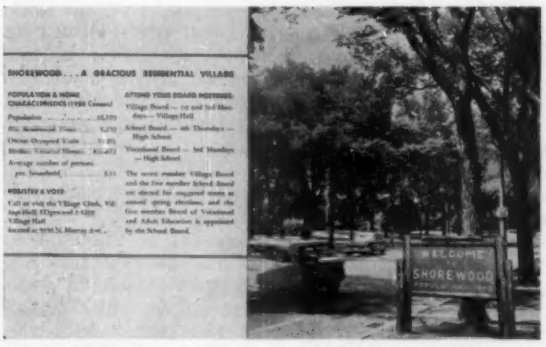
A Committee recommendation for longer tenures for members of the Parks and Recreation Commission has resulted in approval of a proposed charter amendment by the city council.

The amendment, to establish five-year terms for the commissioners, will be up for voter approval in a special election on December 14.

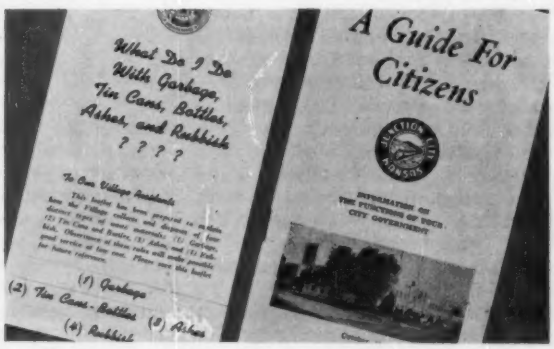
The city has already put into effect a vigorous public-information program recommended by the Committee.

Several city-improvement projects also have been undertaken by the Public Works Department on the Committee's recommendation.

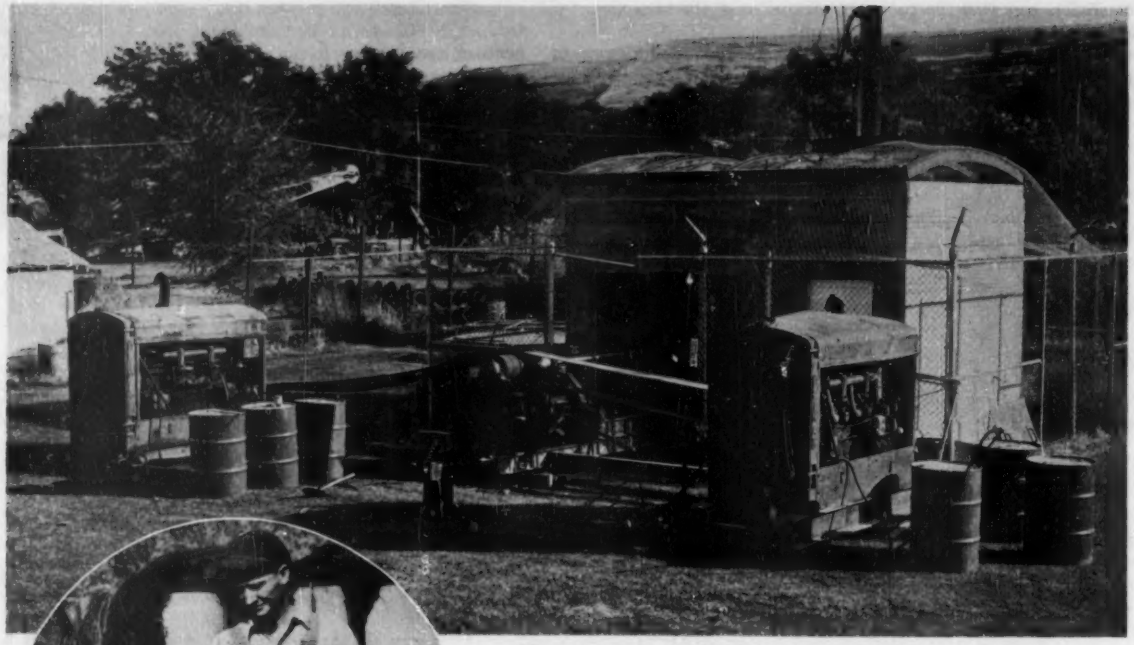
1954



New citizens get this "welcome" in Shorewood, Ill. Citizens, businessmen, and village officials worked together on it.


What Do I Do With Garbage, Tin Cans, Bottles, Ashes, and Rubbish ? ? ? ?
(1) Garbage
(2) Tin Cans - Bottles
(3) Ashes
(4) Rubbish
A Guide For Citizens
JUNCTION CITY KANSAS
INFORMATION ON THE FUNCTIONS OF YOUR CITY GOVERNMENT

"In-between-report-time" publications, like these, put out by Glencoe, Ill., and Junction City, Kans., are needed for MPR.



Above. Test-pumping the old well revealed that an additional 1,000 gallons per minute could be obtained. Left: Roots must be removed from open joints in the infiltration galleries.

Pendleton Proves That

It Pays To Build Big

By ARCHIE FRENCH
City Engineer
and
RAYMOND P. BOTCH
City Manager
Pendleton, Ore.

INSPIRED by the vastness of the terrain, the foresighted developers of the West planned and built generously. Typical was the vision of the men serving Pendleton, Ore., 30 years ago, who, in providing a water system for the city, assured a supply almost four times greater than was then needed.

The men of the Pendleton Water Commission, in 1913, exercised excellent judgment and foresight when they bonded the Commission for $200,000 to finance the construction of the gravity water-supply line. Today, the investment conservatively represents a $500,000 saving for this community of 13,500 in northeastern Oregon. Based on replacement value, the water works is worth well over double this amount.

It is difficult to determine the exact capacity of this supply, yet past records indicate that this source is capable of furnishing water at a rate exceeding 5 mgd (million gallons daily).

This water system, which uses infiltration galleries at the upper end of the line to draw water from the Umatilla River, is still in operation and in excellent condition. It supplies the city with a cool, soft, palatable supply of mountain water with virtually no operating cost, and needing no treatment except protective chlorination. An auxiliary treatment of fluoridation was instituted recently as a dental health measure, but this has no real relation to the water quality itself.

Electric-Eye Turbidity Control

The development of this infiltration supply has unusual features. The supply system consists of open-joint infiltration lines which collect spring and groundwater from the area and deliver it to the head of the main transmission line at the weir

The newest well—third built for the system—represents an important step in the program. Here it is being test-pumped.

New plant equipment includes an Omega fluoride feeder, and a Sparling rate recorder for metering amount of water used.

house. On rare occasions, particularly during excessively heavy rains, the water becomes turbid. Turbidity lasts a short period, but will exceed 1,000 ppm (parts per million) in these periods and, once in the system, constitutes a major problem.

Originally, the department stationed a man at the weir house to close the valve and bypass the turbidity. However, the man has been replaced with an electric eye which permits the valve to be in the open position just so long as the turbidity is below the minimum requirements. This turbidity meter was designed by the consulting engineers.

Water passes from the weir box to the city through a concrete, gravity-transmission line of 18-, 20-, 24-, and 26-inch pipe that measures 16.37 miles long. With the exception of several inverted siphons along its course, the line essentially follows the natural slope of the flowing water and no internal pressure occurs in the line.

Although this transmission line was constructed before World War I, it appears to be in excellent condition at the present time. Its capacity has been measured at Pendleton at 4.8 mgd, which makes it evident that the flow coefficient "n" in the Manning formula must be approximately 0.012. This very low value is comparable to that expected in a new line that has been constructed with the best workmanship.

Summer peak loads were the first to tax the capacity of the system in recent years. To provide relief, the city has constructed, within the city limits, three deep wells that are operated by Peerless turbine pumps. These wells are controlled automatically through a Minneapolis-Honeywell electric controller actuated by the reservoir water level. A continuous, electrical-recording system provides pump operating data on a central control board.

Well Capacity

One well is 16 inches in diameter and 744 feet deep, with a static yater level that is 184 feet below the surface. At the time of construction, this well demonstrated an ability to produce water at the rate of 1,000 gpm (gallons per minute) with a 14-foot drop in the static water level.

A second well, drilled in 1948 to a depth of 740 feet, delivers 1,100 gpm under the same operating conditions. The third well, drilled in 1952, maintains a static water level at 153 feet, but will furnish only 600 gpm with a drawdown of 92 feet.

We use these wells only to supplement the gravity supply during the peak summer months. To date, no change has been detected in the static ground-water level. This water level has the same elevation in all three wells; they all recover immediately after the pumps are shut down.

The wells supply us with excess water at a much lower cost than we would have to pay if we were to construct a new transmission main. The total cost of the three wells, each equipped with a pump, pumphouse, and chlorinator, is $120,000. In this way, the city has an additional 2,800 gpm of water at a rate of $43 per gpm. To build 25 miles of transmission mains that would supply substantially the same amount of water would have cost $1,500,000 for 3,500 gpm, or $430 per gpm. Thus we are solving our demand for peak supply at one-tenth the cost. Since the wells operate only during a two- or three-month peak-load period, their operating cost does not alter the picture appreciably.

Fluoride Feeding

One of the most recent additions to the water system is its fluoride-feeding installation. This was adopted because of interest in the reduction in decayed teeth that preliminary tests indicated could be realized by adding fluorides to the water. The program has the enthusiastic support of our people and the approval of our medical and dental groups.

The water flows by gravity through a distribution chamber before entering the north reservoir, where we have installed an Omega dry-feed machine with dust hopper and scales. This machine is a volumetric continuous-feed type which adds sodium

(*Continued on page* 114)

silico fluoride solution to the water. The untreated water contains 0.20 ppm of fluorides which is supplemented with 0.80 ppm in the feeding operation to achieve the total recommended application of 1.0 ppm.

In order to maintain a consistent residual, the rate of feed is calculated on the basis of percentage of available fluorides and rate of flow. A corresponding setting is made on the fluoride feeder. As a check, daily tests are run with a fluoride color comparator. Sodium silico fluoride is purchased in 100-pound paper bags for 9½ cents per pound delivered. The total cost of the chemical is about $1.00 per million gallons of treated water.

To continue the policy of planning for the future that was begun 30 years ago, we are now embarking on a second long-range water-supply study. The engineering firm of Cornell, Howland, Hayes, and Merryfield of Corvallis, Ore., has been retained to make a water-supply investigation. The recommended expansion and improvements can be divided into three phases. The first covers immediate requirements; the second will be completed by 1960, or when the population reaches 14,500; the third will be completed by 1980, or when the population reaches 20,000.

The principal goals in the first phase are:

1. Construction of a third well
2. Installation of automatic controls to the wells
3. Installation of a pressure system to portions of the distribution system
4. Increase of the reservoir capacity
5. Addition of short lengths of connecting lines to the distribution system.

The first and third points have already been completed; points 2 and 5 are under construction.

The second phase includes the following:

1. Construction of a fourth well
2. Construction of a 1,000,000-gallon addition to one of our reservoirs
3. Installation of additions to the high-level system, if required.

The third phase anticipates the following improvements:

1. Construction of fifth and sixth wells
2. Construction of a 1,500,000-gallon addition to the south reservoir
3. Installation of other distribution-system extensions which are required by the city's growth.

When these developments have been completed and are in operation, we expect that Pendleton's water department will be offering the city its most valuable and thrifty public service.

City Water Works Is Study Unit For Eighth Grade Science Students

AN UNUSUAL PROGRAM for educating school children in good citizenship and giving them an appreciation for the services offered by city departments has been in operation for five years at Phenix City, Ala., with the cooperation of the Phenix City Water Board.

First instituted in the spring of 1948 on a limited basis, the program now consists of an integrated unit of study of the operation of the city's water-works system by eighth-grade science classes of the Phenix City Central High School Annex.

Each year the eighth graders attend a five-day course, composed of lectures, documentary films, and field trips to the water works. This year the program for the first day included two movies — one on water works and water supply in general, and the other on groundwater supply. The films were then followed by a lecture on the operation of the Phenix City Water Works.

On the second day, special problems of supply and distribution in the Phenix water system were discussed, and a motion picture on water meters, "Made to Measure," was shown. The third day was devoted to the filtration process, with demonstrations of the types of chemical analyses and control tests used.

The fourth day was devoted to a visit to the water-works plant, where the youngsters were able to watch the water supply and filtration process from start to finish. On the fifth day, the students held a discussion panel in the classroom.

The purpose of this instruction, according to Superintendent of Filtration D. R. McLemore, who has presented the course for the past five years, is ". . . to stress to the youngsters the convenience and safety involved in every glass of water they drink. As future citizens of Phenix City, we also try to get them interested in their city water works."

Prizes for Best Booklets

To unify the material covered in the course, students are asked to compile study booklets covering the facts they have learned about the water works. The best booklets are selected and prizes are awarded on the basis of thought, work, and ingenuity.

Credit for the success of the program is due to members of the Phenix City Water Board, which is composed of Ralph Ralford, chairman; Cloyd Tillery, and Clyde Preddy. George E. White, Jr., is general manager; Jack Kinney, secretary, and D. R. McLemore is in charge of the filtration plant.

The eighth graders see Ben W. Fredrick demonstrate a meter-testing machine.

The Case for Public Housing

By CHARLES E. SLUSSER
Commissioner
Public Housing Administration
Washington, D. C.

I HAVE JUST RETURNED from a 30,000-mile trip that took me into every part of the country. On that trip I saw more of the diseased sections of America than most men do. I found myself continually in the position of saying "There cannot be a worse slum!" and the next day being faced with just that.

In compensation—I found out, firsthand, in place after place, what public housing can do for your cities if you use it properly. Where you administer it properly—where you combine it with redevelopment, with expressways, with parks and playgrounds—it works. It means health and wealth to your community and at very low cost.

But I found, also, that the people understand less about public housing than they do about any other major problem of government.

Most people think of it as a costly program. It is not. True, it costs something—this year its subsidized payments will reach $40,000,000. That is just 1% of what we are spending on foreign aid alone.

I think the approximately million people living in public housing today are worth it. I think they are each worth the $40 to $50 a year we are spending on them. I think they are worth a lot more than that.

Comparison with Other Subsidies

Our Government subsidizes a lot of things — $300,000,000 for our mail service, $420,000,000 for highways, $234,000,000 for rivers and harbors, $169,000,000 for reclamation and irrigation, $115,000,000 for commercial aviation, $82,000,000 for school lunch programs, and $67,000,000 for our 450,000 Indians.

This year's housing program costs much less than any of these. The average taxpayer, the man making $4,000, put up 6 cents this year, through his income tax, to keep it going. He paid twice as much for Wildlife Restoration.

Public housing has meant to date—to the cities that have it—the payment of $2, in lieu of taxes, for every dollar previously collected in taxes, from the slum sites now occupied by healthful public housing. Further, it has been responsible for the payment of delinquent taxes equal to a year's full tax levy on these same slum properties. . . .

The *United States Municipal News* reports that although slum and blighted districts comprise about 20% of our metropolitan residential areas, they account for 33% of the population, 45% of the major crimes, 55% of the juvenile delinquency, 60% of the tuberculosis victims, 50% of the arrests, 35% of the fires, 45% of city service costs—and 6% of real-estate tax revenues.

Every one of us today is paying for most of the slum dwellers' rent.

Effect on Real Estate Values

You gentlemen are as familiar as I am—if not more so—with the problem of declining real property values, especially as it is reflected in your tax revenue. In traveling about the country, I frequently encountered the argument that public housing projects are bad neighbors in that they tend to lower adjacent property values.

It just isn't so.

Here is one example of the effect of public housing on adjoining property values. This occurred in a Pacific Northwest city with two public housing projects. In an area of 12 blocks adjacent to one project, there was a 112% increase in assessed land values: in the case of the second project, there was a 96% increase in assessed land values in an area of 20 blocks adjacent to it.

Here's another instance where public housing acted as a stimulus to adjacent property values. In a California city, the housing authority acquired land in 1942 for a project at a cost of $750 an acre. Recently, a corner lot across the street from this project sold at a value of $75,000 an acre. The area within a one-mile radius of the project has over the past 10 years shown a higher appreciation of value than any other residential area in the city. . . .

But the people outside public housing, the people who do not struggle with municipal budgets, do not know or have never been shown what public housing means to their community. I think they should be told, and I think it is the job of every municipal authority, that has found that it can work with public housing, to tell them.

Our citizens are ashamed of our slums. They know we need housing of all kinds. Give them information and aggressive municipal leadership and they will respond. . . .

Private Enterprise Does The Building

There are, of course, those that say all housing should be a matter for private enterprise. I am for that so long as a profit can be maintained, and certainly, no one but private enterprisers are contracting to build public housing units. On the other hand, public housing tenants are, because of the prescribed income limits maintained by the Public Housing Administration, those people who, by and large, could not represent profit to a landlord unless he were making if from slum property.

The only money that comes out of slum properties is that made from human misery.

The Case Summarized

1. It is the best tool we have for rehabilitating the slums of America and the people that live there.
2. It is an investment that pays large municipal dividends in its reduction in police, fire, and health costs in the areas in which it operates.
3. It represents a net gain in municipal income without the cost of collection that normal taxes entail.
4. It means a better life for all of us. Every citizen profits from slum eradication. Public housing improves adjacent property, stops its deterioration.
5. Its costs are negligible, far outweighed in size by any other number of government subsidies.

EDITORIAL NOTE: This article contains excerpts from a speech delivered at the annual conference of the American Municipal Association, New Orleans, La., November 30, 1953. Commissioner Slusser was formerly Mayor of Akron, Ohio.

AMA Meeting Highlights Intergovernmental Problems

VIGOROUS DEBATE on such important local issues as public housing, public power policies, and intergovernmental relations featured the 30th Anniversary Congress of the American Municipal Association, held in New Orleans, November 29 to December 2.

Important statements on Municipal Street and Highway Policies, Municipal Revenue Policies, and Municipal Objectives in Intergovernmental Relations were adopted by the assembled delegates of state leagues of municipalities and of individual cities.

The theme of the Congress was, "The City's Place Among Governments," and a major highlight of the program (in addition to the lavish New Orleans hospitality) was the first formal public hearing of the newly created National Commission on Intergovernmental Relations specifically for the purpose of obtaining the municipal viewpoint regarding proper allocations of functions between federal, state, and local units of government. One U. S. Senator and 10 Congressmen participated in the hearing.

Among the leading guest speakers at the AMA Congress were Sam Rayburn, Congressman from Texas; Frank C. Moore, president, Government Affairs Foundation, Inc., and Sherman Adams, assistant to President Eisenhower. Formerly Lieutenant Governor of New York State, Mr. Moore urged that appointed citizens' commissions be more widely used in studying and recommending action on particular problems affecting state-local relations.

Housing was a matter of special concern during the program, which included a debate between Mayor Joseph S. Clark of Philadelphia, and Mayor Norris Poulson of Los Angeles on the question of whether there should be a change in AMA's policy on housing and slum clearance. Mayor Poulson charged that public housing was socialistic, while Mayor Clark declared that his administration believed the full force of government at the local, state, and national level should be brought to bear to halt the deterioration of cities through slum conditions.

In a separate speech, Charles E. Slusser, new Commissioner, Public Housing Administration, presented a strong case for public housing.

Also, in another address, G. Yates Cook, Director, Department of Rehabilitation, National Association of Home Builders, and formerly director of the Baltimore housing improvement program, pointed out that conservation and slum prevention must go far deeper than physical reconstruction and modernization of old houses and requires concerted cooperative effort among municipal and other agencies to eliminate other conditions that created slums.

The new Executive Committee of the American Municipal Association, seated (left to right): Commissioner Chelsie J. Senerchia of Miami, Fla.; Robertson W. Smith, Executive Director, Idaho Municipal League; Mayor Allen Thompson of Jackson, Miss., new AMA Vice-President; Mayor William E. Kemp of Kansas City, Mo., new AMA President; Clarence C. Ludwig, Executive Secretary, League of Minnesota Municipalities, and John H. Huss, Director, Michigan Municipal League.

Standing (left to right): Herbert J. Bingham, Executive Secretary, Tennessee Municipal League; Mayor R. S. Wallace of Aberdeen, S. D., Past President of the South Dakota Municipal League; Mayor J. L. Bullard of Kerrville, Texas, President of the League of Texas Municipalities; Max A. Conrad, Executive Secretary, League of Iowa Municipalities; Mayor Charles A. Pearson of Anaheim, Calif., Past President, League of California Cities; Mayor Frank P. Zeidler of Milwaukee, Wis.; Mayor Joseph S. Clark, Jr., of Philadelphia, Pa., and Tom McCoy, Executive Director, Utah Municipal League.

Missing when the picture was taken: Mayor William B. Hartsfield of Atlanta, Ga., AMA's immediate Past President.

Street and Highway Policies

On the subject of municipal street and highway policies, there was considerable agreement with the point that state highway departments receiving federal funds should be required to create urban road units to assist cities in meeting highway and street problems.

Increases in federal appropriations for roads and streets within corporate limits were also called for, on the grounds that the road problem today is "getting city people out of traffic jams and not farmers out of the mud."

Among the speakers during this session were Chelsie J. Senerchia, Councilman of Miami; Glenn Richards, General Superintendent of Public Works, Detroit; L. Burdette,

City Manager, Hickory, N. C.; Morgan Strong, Executive Secretary, New York State Conference of Mayors, and Mayor Ben West of Nashville.

Speakers on municipal revenue policies pointed to the importance of cooperative effort and citizen participation in solving the problem of obtaining sufficient local income to meet growing needs. In terms of local government action, the AMA policy statement called for, among other things, long-range financial planning, revenue legislation, proper assessing practices, capital-improvement programs, and good debt management.

Among other subjects discussed were the use of consultants and surveys and city industrial promotion.

The resolutions included the following: urging Congress to include all public personnel under OASI upon the same basis as employees in private employment, without hampering restrictions; approving a study for expanding AMA staff services, urging a strengthened federal civil defense program and direct contacts where necessary between the F.C.D.A. and critical target cities; opposing proposed taxation on revenues of electric and other municipal utilities; asking for delay in the announced change of federal public power policy, and requesting that municipalities be given higher priority in receiving federal surplus property.

In his presidential address, "The City's Place in Government," Mayor William B. Hartsfield, of Atlanta, traced the movement of population to metropolitan centers, and the problems created because not enough cities have full home rule and because rural lawmakers control many state legislatures.

New Officers

New AMA officers for 1954 are Mayor William E. Kemp of Kansas City, Mo., president, and vice-president, Mayor Allen Thompson, Jackson, Miss.

New members of the Executive Committee are Mayor Charles A. Pearson, Anaheim, Calif.; Dr. J. L. Bullard, Mayor of Kerrville, Texas; Mayor R. S. Wallace, Aberdeen, S. D.; Councilman Chelsie J. Senerchia, Miami, Fla.; John H. Huss, Director, Michigan League of Municipalities, and Robertson W. Smith, Executive Director, Idaho Municipal League.

Re-elected to the Executive Committee were Mayor Frank P. Zeidler, of Milwaukee, and Herbert J. Bingham, Executive Director, Tennessee Municipal League.

Trend Toward Regional Schools Noted in Suburban Areas

MUNICIPAL OFFICIALS and community leaders may well be pleased by the trend toward consolidation and centralization of school districts and the building of regional schools to serve several municipalities.

Such steps toward increasing the efficiency of school operations and raising educational standards are important to the local taxpayers' pocketbooks, from which municipal improvements must also be financed. They are important because they indicate widespread citizen concern and action on a specific problem—the school shortage—citizen action which has resulted in breaking through the sometimes narrow provincialism surrounding outmoded municipal boundary lines which often also delineate local public school districts. The bettering of school conditions through such citizen efforts undoubtedly enhances the attractiveness of smaller community living environments. Therefore, there are other implications for municipal growth in suburban areas of key interest to local officials.

But perhaps the major question posed is "Why, if efforts toward centralizing school plants seem to be growing in success, should there not now be increased attention toward the grouping and consolidation of more municipal services in suburban areas?" Enlightened citizen interest probably will support such efforts, and often there will be substantial savings to the taxpayer.

Two notable recent school district centralization efforts occurred in October in north Westchester County, New York, and in north Bergen County, New Jersey. Both were well backed by active citizens' groups, who conducted excellent promotional programs.

In Westchester, the residents of parts of Bedford, Pound Ridge, and New Castle, composed of seven present school districts, approved formation of a central school district by a majority of 7 to 1. Two high schools, four grade schools and a rural one-room school now serve the area. Under centralization, present high and grade schools will be occupied by kindergarten through grade 6, and a new junior-senior high school for 800 secondary pupils, to be completed in 1955, will house grades 7 to 9 (junior high), and 10 to 12 (senior high).

In New Jersey, on October 6, the residents of Montvale, Woodcliff Lake, Hillsdale, and Riverdale, previously merged into the Pascack Valley Regional High School District, voted 3 to 1 for approval of a new $1,250,000 school, with an initial capacity of 600 students expandable to provide for 900 students. The State Department of Education had approved the plan, ensuring a grant of additional financial aid.

Coffee Break Gets Official Nod

THE COFFEE BREAK—by now an almost universal custom for workers—has received a tardy okay from public and private management alike.

Witness a Los Angeles ordinance which lets public employees take short rest periods, at the discretion of their supervisors. And witness a survey conducted for a coffee concern, showing that more than 54% of the nation's employed persons have coffee available during working hours.

An analysis of this practice among public employees, appearing in an article in the current *Public Personal Review* of the Civil Service Assembly, says that official recognition of the coffee break comes as belated acceptance of a well-established custom, rather than as a move for greater efficiency, more production, or better employee welfare.

The real problem is how to control the custom so that everyone has a rest period and that no one abuses the privilege by staying away from work too long. It may pay public officials to see what private industry in their community is doing about the coffee break, before forming their own policy.

Once coffee facilities are available, machine employees may simply stop work together for the allotted time. Rotation will be the best system for those at a public counter or teller's window, where the customer expects prompt service and a business-like attitude. And good public relations demand that the coffee be served away from such a place, for the aroma may not be a pleasant one to the man who is cooling his heels while waiting for a clerk to help him. In working rooms away from the public, coffee may be brought directly to each worker at his desk.

251,917 Tax Bills in 14 Days

By BEN GENTLE
Tax Officer
Dallas County, Texas

COMPLETED in 14 days and one hour — without overtime and with only regular county employees — an entire tax roll of 251,917 bills for $763,806,590, requiring 8,904 roll sheets with a breakdown of 30 items on each side — this was the record set for the 1953 tax roll in Dallas County, Texas.

Being the first major county in Texas to complete the tax rolls is nothing new for the Dallas staff. Each year since 1948, when a mechanized tax-billing system was adopted, the Dallas County roll has been the first from a major county to reach the State Comptroller.

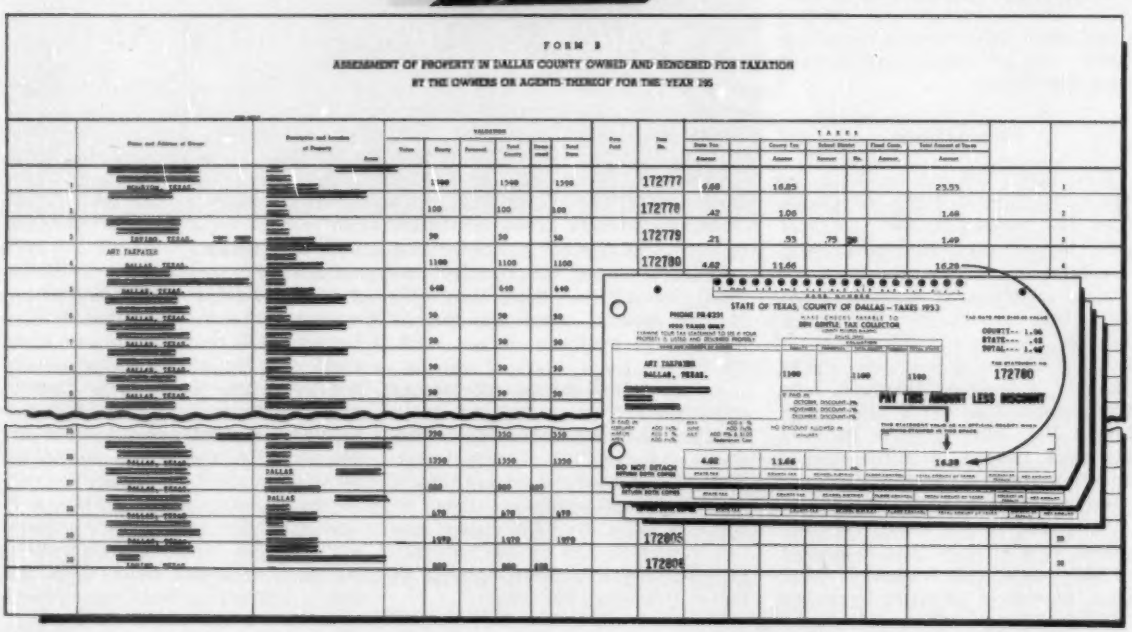
Basically the 1953 operation was very simple. Property descriptions, valuations, and owners' names were printed on the rolls and bills from Addressograph plates. Valuations were totaled on each page of the tax roll, and the page was matched with the corresponding bills. Eleven Burroughs tax-billing machines simultaneously prepared the bills and rolls, computing state and county tax and listing pre-calculated school and drainage-district taxes. The operators totaled out at the end of each page and proved the billing total by multiplying total valuations for the page by the tax rate. This was a simple operation because the design of our billing machines provided an instantaneous multiplication feature. The result of this computation was used as a proving check against the billing total.

Two copies were sent to the owner and the third retained in the office. When making payments, the owners' copies are receipted, and one is returned to the owner and the second retained by the cashier. The bills were delivered to the post office in bulk, so that all owners received their bills at about the same time.

All tax bills are receipted on one of 17 Burroughs tax-receipting machines, located in the suboffice and windows of the control cashiers.

The machine marks the bill "PD" and identifies it with transaction number, date, amount and cashier's symbol. As a by-product,

The 11 Dallas County taxbillers (author standing at right) and a tax-roll page and bill-in-triplicate of record tax job they performed.


FORM B
ASSESSMENT OF PROPERTY IN DALLAS COUNTY OWNED AND RENDERED FOR TAXATION
BY THE OWNERS OR AGENTS THEREOF FOR THE YEAR 195
STATE OF TEXAS, COUNTY OF DALLAS – TAXES 1953
PAY THIS AMOUNT LESS DISCOUNT
DO NOT DETACH

this information is recorded on a locked-in audit tape, and the amount is automatically added to the locked-in total of the day's receipts.

Each of our window cashiers can handle around $100,000 in collections a day, balance receipts, and be out of the office half-an-hour after closing. The 1953 bills were punched for key sorting, so they may quickly be sorted back to page order after payment.

Reports of receipts are prepared on the tax billing machines, which are converted for this purpose and are submitted to the State Treasurer and County Auditor.

One of the best features of the system is the ease of training operators, which permits us to use personnel from other departments. One young man from the cashier's office, for example, had never run a billing machine until the 1953 roll. By the end of the first week, he was producing 1,500 bills a day, and more than once during the billing period he ran 1,800 —all with accuracy.

Planning Municipal Alarm Systems

By L. E. LOWRY
Consultant
Fire-Alarm and Police Signal Systems
1235 *Ridge Avenue*
Evanston, Ill.

ADEQUATE fire- and police-emergency signaling requires study of existing facilities and methods, a determination of what is required to protect the city, correct preparation of plans and specifications, and informed purchasing. Often a large part of the existing facilities can be continued in service and the methods improved.

The determination of what is needed should be studied with a view to the requirements of residential and outlying districts, as well as to those of the congested high-value district, as all property owners are taxpayers and are entitled to their share of protection. Loosely drawn specifications may result in excessive cost, or in the unsatisfactory performance of the contract.

Fire-Alarm System

Fire- and police-signaling systems are both vitally important, and as each is a major subject in itself, this article will deal almost exclusively with the fire-alarm system.

In addition to public safety, the insurance credits that result from an adequate fire-alarm system are important to a community. In the Grading Schedule of the National Board of Fire Underwriters, an approved fire-alarm system is rated third in the municipal fire defenses. The reason is that alarms promptly given minimize the conflagration hazard and enable fire extinction with relatively small loss.

Many cities deficient in fire-alarm protection and needing to eliminate but a few points of deficiency in order to qualify for a better classification and correspondingly lower basic insurance rate, can earn these benefits by a comparatively small expenditure for fire-alarm improvement. A better classification for a city will save insurance ratepayers more than the cost of fire-alarm improvements.

The allegedly high cost of the conventional fire-alarm system employed in this country, especially in cities of considerable area, is largely due to two factors: (1) the cost of extending the circuits from the central station to the outlying districts, and (2) the building for housing of the central station. More than one-half of the cost of fire-alarm systems in cities of considerable area is usually involved in the two items of circuit construction and central station building. The practice of having but one control point in cities of considerable area with two or more fire stations is questionable.

Decentralization of the public fire-alarm system is suggested as one means of materially reducing the cost and increasing the margin of safety in operation. With a decentralized system, a city is divided into districts. Each district has its own complete system with a relatively small district central station where all alarms originating within the district are received, recorded, and automatically transmitted over alarm circuits to other fire stations in the district and—to a control and supervisory station—thus enabling fire headquarters to be instantly informed of any fire occuring within city limits.

Decentralized System

Cities in foreign countries have, for many years, used the decentralized, or district-type system. Oslo, Norway (population 300,000) has five district systems; and Johannesburg, South Africa (population 700,000), has nine.

The decentralized type of system is suggested for the consideration of cities that have not yet extended fire-alarm protection to all outlying areas within city limits, and for those contemplating system rehabilitation.

The price the city will pay is based on the information issued to intending bidders. Plans and specifications must be complete and clear, provide for unrestricted competition on all material items, and establish a standard by which the bids may be judged.

Where plans and specifications are left to the discretion of each bidder and to be submitted with their bids, the purpose of competitive bidding is defeated and competition is restricted in that no standard has been established that will enable purchasing authorities to determine the lowest bidder.

Degree of Specification Detail

Where details of equipment are difficult to obtain, and especially when equipment is made by only a few firms, with each manufacturing its own designs, as is the case in the municipal signaling field, it has often been found difficult under laws requiring that plans and specifications be prepared, to determine to what extent the plans and specifications should be detailed and still provide for competitive bidding in its true sense.

The difficulty that presents itself, is that the product of each manufacturer differs from the others—no two are alike. Therefore, if the plans and specifications must be given in complete detail, the city, of necessity, must adopt the plans of one of the manufacturers and thus exclude competition, or else prepare its own equipment designs. In either case, the cost to the city will probably be far greater than it should be.

Plans and specifications for municipal signaling systems and equipment can be drawn to serve the purposes of competitive bidding: enable bidders to bid intelligently; enable the city to obtain competitive bids on all important elements of a project and determine the lowest and/or best bid in each case; and require the successful bidder to perform the contract in accordance with the terms and conditions thereof.

Public Relations—

An Opportunity for Your Water Department

By A. O. PUTNAM
Director of Public Relations
Layne & Bowler, Inc.
Memphis, Tenn.

THE MEN who are responsible for our cities' water supplies work anonymously and with very little appreciation. I found that out much to my amazement and regret during the past two years.

During that time I have visited some 150 water-department superintendents, chief engineers, and utility heads throughout the country—from Sumter, S. C., to London, Ontario, Canada; from Truth or Consequences, N. M., to New York City.

We rolled up our sleeves and talked about water supplies, department equipment, production, and domestic and industrial demands. I gathered, too, that almost everywhere there is an appalling lack of understanding and appreciation of the mechanics of water departments and the men who run them.

Developing a Sound Program

But there is a way out of this situation. You'll find it in a sound public relations program for your water department.

Immediately, I know you're thinking: "My water superintendent is a technical man, not a press agent!"

But beyond the fact that he is an engineer or technical man is the fact that he is an administrative official and whether you realize it or not, he already has a public relations program in effect.

It's either good or it's bad. If he claims no public relations program, then it is bad.

What, then, does good public relations involve? I say that it is winning the confidence of your community by telling the story of your water department in a manner that will excite the public's interest in what you are doing for the benefit of their daily living.

Obviously, there is a story—an important, exciting, fascinating story, a continuing story, in the operation of every water department. It needs only to be told and every water-works official is capable of arranging for that telling.

Good public relations starts, properly, right at your own plant, with good housekeeping. Attractive grounds and well-kept buildings, tanks, pumps, and other equipment immediately create a favorable impression and inspire civic pride.

Using Property to Advantage

There is frequently the opportunity, too, to develop parks and recreation areas on water-department property. An outstanding example of such a program is at Spartanburg, S. C., where a 70-acre park, including picnic grounds and swimming pool, is enjoyed by thousands of citizens the year around. A brochure distributed recently by that city's water department notes that "the concessions at the pool pay the cost of operation, but by far the most important return upon the investment is measured in terms of improved public relations which has resulted."

A good public relations program recognizes, too, the importance of good employee relations. It will let employees share as much as possible in the plans and policies you set. It will win their enthusiasm for making every personal contact a challenge to prove the department's efficiency, friendliness, and desire to serve the public well. It will guarantee that every visitor to your office or plant gets a sincere welcome.

Public relations become merely propaganda if what you say about yourself and your department does not conform with how you act. Be sure your house is in order before you invite the guests in.

But when you are ready to entertain, go first to your local newspaper. It's one of the best places to tell your story. Almost everything that happens in your water department—new personnel, new equipment, operations reports—is *news*.

Take the initiative by calling your local newspaper when you think you have a story. Where there is a picture possibility, suggest that a picture be made for use in the paper.

Good relations with your newspaper is essential to any effective public relations program. And that means cooperating with editors, reporters, and photographers in providing them with details of not only the good things that happen to you but also of the accidents, breakdowns or other mishaps. You'll find them sympathetic, understanding, and fair. And, if you've earned their respect, you'll enjoy in them a powerful ally when some irate citizen attempts to boil you in your own water without justification.

There are many avenues of worthwhile publicity open to you beyond your local newspaper. Local, regional, state, and national trade magazines pertaining to your business are always seeking good copy. Articles in these magazines about how you solved unusual problems or improved on existing methods will put your name and your city before a big audience of interested, influential readers.

Press Relations

You don't have to be a writer yourself to get such stories placed, either. Given the facts that you can easily furnish, any trade magazine editor can whip them into a good yarn.

Your supply sources can help on this. Most of them have good contacts with trade publications and are constantly seeking publicity for their own products. Encourage them to publicize you and your department in national magazines, company bulletins, and house organs. Cooperate with them in the gathering of mate-

rial and particularly in arranging for pictures.

Save clippings or tear sheets of any material published about your department. You can use them to good advantage in displays, in special mailings to your customers, council members or selected lists of individuals and firms.

Literature for Distribution

Sometimes it is a good idea to reproduce these in booklets or bulletins to be given to plant visitors or distributed at fairs.

How many use all the postage paid in mailing bills each month? Without additional postage cost, you can insert a leaflet or bulletin that will tell something educational or interesting about your operation.

In this matter of printed material I know that you are limited by your budgets. But an all-around public relations program should include some printed material. And I think you will find that you can do a satisfactory job on a small budget. And, as your public relations program develops and makes itself felt, you will find it easier to get money for this purpose.

Various materials can be adapted also to exhibits featuring your water department. Photographs, models of your equipment, which you can obtain from your supplier—all can be effectively combined in a presentation to acquaint the public with the vast amount of equipment and work necessary to give them an adequate supply of good water. There are many opportunities for such exhibits — at county fairs, schools, industrial shows, municipal meetings, and conventions.

Plan your exhibit for eye appeal. Give it a specific theme. Stay away from complicated graphs and too many statistics and you'll have people stopping, looking, and asking. And they'll leave with a deeper appreciation of their water department.

Plant Tours

Don't overlook the youngsters in your public relations program. Take advantage of natural youthful curiosity and its influence on parents by staging an annual "School Day at the Water Department." Give the youngsters a complete tour of your plant from well to faucet, explaining the processes and machinery by which their water is obtained. Let them ask plenty of questions and be prepared to answer them. If possible, give them a souvenir folder with a brief history of the department and facts pertinent to its operation and maintenance.

Most of the kids will get a big kick out of such an experience and you may be sure their parents will hear about it—if their tour has been well planned, interesting, and informative.

One water department superintendent in a southern city credits such a program with playing a big part in cutting complaints 50% in a 10-year period. Why? Because a person who knows and appreciates your problems is more lenient in his judgment, less likely to find fault. The youngsters you entertain today will be your customers tomorrow.

The same kind of a special day can work wonders with your city council. Invite those who control your finances and policies around and acquaint them with your responsibilities. They'll enjoy the outing and you'll benefit by better understanding.

Your council should, of course, have regular progress reports on your department's activities. Production, consumption, needs, and recommendations should be covered adequately yet briefly.

The person-to-person contacts you and your employees make can be the most effective public relations approaches of all. Take advantage of every opportunity to speak to civic and business clubs, parent-teacher associations, industrial groups, schools and municipal meetings to tell the story of your water department.

Dramatize your talk with photographs, production charts, and other material that will give your listeners a clear picture. Check your equipment suppliers for movies available for club showings and make arrangements to have them included on the program.

Contacts with Customers

And, have you ever considered making personal visits to your customers' homes and industrial plants? Get out of your office and see them. Find out personally what they think of your department. Explain your policies and services, ask for suggestions. You'll learn lots and you'll ward off many a possible future complaint. Make sure each meter reader is well versed in your public relations program. In making his personal calls day by day he has the greatest opportunity of any member of your department to put public relations into action.

As your public relations program expands, you may want to buy advertising space in the mass communication media—newspapers, radio, television, billboards, car cards. Your chamber of commerce will agree that a good, adequate water supply is a big lure in bringing important new industries into your city.

Finally, there is one element that every public relations program must have to succeed. It's illustrated by the story of the minister who opened the men's Sunday School class by calling for the singing of the well-known hymn about "Little drops of water, little grains of sand." The response was woefully weak, so halfway through the first verse he stopped them. "Come, come, you can do better than that," he remonstrated. "Now try it again, 'Little drops of water,' and for goodness' sake, let's put some spirit into it!"

Gentlemen, put some spirit into your water department public relations and it's bound to succeed.

This article is based on a paper delivered at a recent meeting of the California Section of the American Water Works Association.

Houston's Plans for 1956 World's Fair

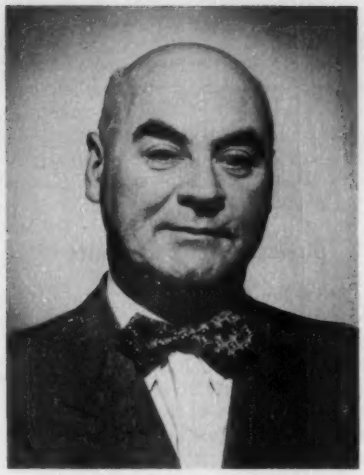
"EDITORIAL ASIDE" from the *Journal of The American Institute of Architects* for October 1953:

"Get a firm grip on your hats; Houston is girding itself for a World's Fair. The superlatives we have known in the past are going to topple like a set of pins in a bowling alley. Site, a tract of 935 acres, adjoining the 455-acre state park on the Ship Channel. Cost, no one has ventured a guess. Money figures, thus far, have been concerned with what new cash the fair will bring to Houston, and the estimates center on the round figure of one billion dollars. Objectives: the promotion of peace and the restoration of free trade between nations; the display of achievements of the atomic age; the opportunity to show the world a new industrial frontier; the raising of a large sum of money to endow charitable, educational and research institutions (expected surplus of a nonprofit enterprise); and the creation of a permanent center combining recreational facilities with museums, educational, scientific, and trade exhibits. Opening: 1956.

"A Design Board has been working for months under the chairmanship of Gosta Sjolin, with architects and engineers whose names are familiar to most of us—C. Herbert Cowell, Arne Engberg, George W. Rustay, Karl Karmath, Talbott Wilson and Harold Calhoun.

"Watch Houston!"

Purchasing Public Works Supplies and Equipment



By A. L. LEHRBAUMMER
Assistant Purchasing Agent
Milwaukee, Wis.

PUBLIC WORKS EQUIPMENT embraces air compressors, bituminous and concrete mixers, catch-basin cleaners, power cranes and shovels, graders, front-end loaders, portable pumps, snow plows, spreaders, refuse trucks, hydrants, water- and sewage-treatment equipment, etc.

Purchasing these machines, apparatus, and devices is a far more complicated and demanding job than the routine buying of fuel, paper, foods, and other materials and supplies. It calls for the preparation of specifications that will allow all to bid who have equipment which will satisfactorily fill the performance requirements.

As one of the cities with a central department of purchase, which competitively purchases this type of equipment, Milwaukee believes it has a big story to tell city officials of successful purchasing in this paramount municipal field.

Effecting Economies

To save money in the purchase of public works supplies and equipment, it is primarily important that needs are foreseen in ample time to request competitive bids. Bids for term contracts and agreements for a period of six or twelve months, or for one delivery on winter items, such as calcium chloride, rock salt, anti-freeze, tire chains, and fuels, should be started six months in advance of the need—say in May or June.

Likewise, those commodities needed to carry on the summer work, such as sand, gravel, stone, sod, topsoil, grass seed, etc., should be prepared for bids during November and December. Best bid prices are received in periods of least demand.

In some communities, which do not have centralized purchasing, the city engineer or another official does the purchasing. It may be that the size of the town or village does not warrant a full-time purchasing official. Engineers are too busy today to spend time interviewing salesmen, maintaining source-of-supply lists, tabulating bids, and the routine of purchasing.

There should be some other delegated authority through which all the purchases are channeled. This may be a purchasing agent, city clerk, financial officer, or a committee. Then, to avoid all criticism, full and complete specifications should be prepared and bid requests sent to all prospective bidders for full competition. The bids should be opened publicly at a predetermined time after keeping them under lock and key until the time set for the opening. After the reading a full tabulation of the bids received should be conspicuously posted as public information.

The question of preference to local bidders arises very often and is bound to be more conspicuous in the next few years because people are again around looking for the business of municipalities. The City of Milwaukee gives preference to local bidders only when all things in the bid are equal. First preference is given to those who maintain stock in the city; second, to those who maintain stocks in the county; third, to those who reside in the city but do not maintain a stock; and, fourth, to those who reside in the county and do not carry stock.

Performance Specifications

When specifications are prepared, the using department, or personnel, should cooperate with the purchasing authority to the fullest extent. The people who use the equipment or supplies must convey to the people who furnish them the minimum requirements which must be met.

In the matter of equipment, physical characteristics may tend to create a monopolistic specification and eliminate all competition. The necessary physical points should be covered, but the specifications should be augmented with a performance demand. What will this piece of equipment be required to do?

Specifications on fire apparatus, other motor vehicles, construction equipment, and some of the everyday supplies are quite controversial. A very successful and fair procedure in establishing acceptable specifications is in effect in the City of Milwaukee. A Standards and Specifications Committee, consisting of four men, including the City Purchasing Agent, exists to deal with such problems.

Handling Prospective Bidders

Whenever specifications for very competitive items are drawn up to be used for a purchase, this Committee mails a copy of the tentative specifications to all prospective bidders, asking them for their comments. They are also invited to appear at the meeting at which these specifications will be discussed. After the specifications have been publicly reviewed and revised so that they are acceptable to the city and to those bidders who handle a suitable product, the bids are requested. This procedure saves many headaches for purchasing authorities.

In these days when every possible saving must be made, further efforts should be expended to make the employees of a municipality more aware of the need for getting greater value for each dollar. For example, an engineer with the City of Milwaukee had his suggested revisions of a specially constructed water hydrant adopted. This simplified the construction and resulted in substantial sav-

ings. We recently purchased 400 water hydrants at $101.53 each which previously cost $155 each. This meant not only the immediate saving of $21,388 in this transaction, but also further saving in the future.

For many years we were purchasing springs for a snow plow from the vendor who furnished the plow. These were ordered year after year by the part number at $4.62 each. Several years ago detailed specifications were drawn up for the springs which, accompanied by a drawing, were sent to the various spring manufacturers for a quotation. The low bid for the identical spring was $1.68 each. Two hundred of these springs have been purchased on that specification each year since at a saving of almost $3 per spring, or $588.

Since 1945, the problems of a public purchasing official have been considerably aided by the National Institute of Governmental Purchasing. Through national headquarters, help for the solution of a problem can be received from a representative cross section of the members. Often a survey is made on a national basis to obtain experience records. Unified action helps accomplish many beneficial objectives. One of these was recognition of motor-vehicle dealers of the federal excise tax exemption on auto parts.

In closing, let me again emphasize that furnishing the supplies and equipment needed for public-works projects is a big job and to do it right, so that the best interests are served, teamwork between the engineering and purchasing personnel is of the utmost importance.

Every Street Opened After Every Snowfall

AS A RULE, the heavier each snowfall is, the more widespread a city's snow-removal program gets. Portland, Maine, generally expects an average of 70 inches of snow per year and may get as much as 120 inches.

At 11 a.m. on February 18, 1952, the city found itself with 25½ inches of snow that had arrived in a single storm lasting since 10 p.m. the night before. Not until February 21 did the city show signs of recovery.

Nevertheless, the city held to its snow-removal policy of keeping at the job until every street in Portland's 200-mile street system was cleared and opened. About 19 miles of streets were completely cleared, and the snow hauled away. Today, when a storm arises, nearly 20 units roll out of the public-works yards and go to work.

Today, Portland rolls out nearly 20 units of equipment when 2 inches of snow is on the ground and the weather report indicates that the fall will continue. In many areas, raw salt alone is able to keep the snow soft and mealy so that it is easily handled by plows and keeps the pavement ice-free. On certain steep intersections, the city uses a sand-and-salt combination for ice control. Sand boxes are placed on hills before cold weather sets in.

Portland likes big equipment to fight these snows. The city maintains three Barber-Greene loaders, two Hough Payloaders, two Cletrac tractors with snow-bucket attachments, a Walter Snow Fighter with a Humphrey sander, as well as a fleet of trucks equipped to carry blade plows.

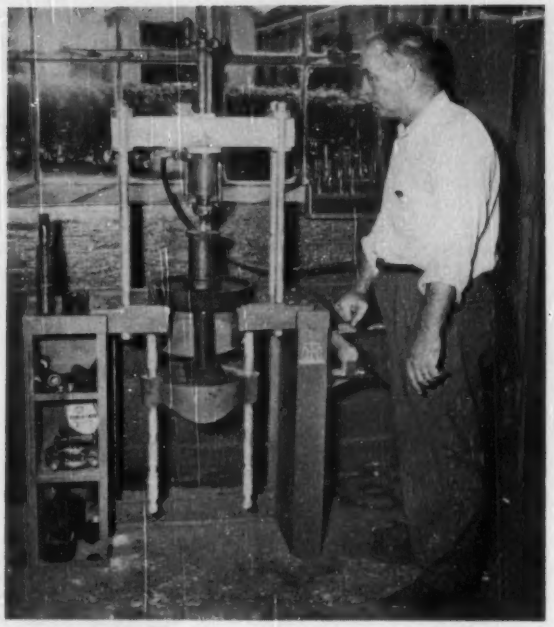
The snow-removal work is a function of the Department of Public Works and is supervised by Frank W. Bryant, superintendent of streets.

When the weather man orders snow for Portland, Maine, it can mean serious business.

Big equipment, like a Walter Snow Fighter, is needed to keep streets cleared.

The Handiest Tool in the Shop

Owatonna, Minn., municipal electric p'ant finds a tool that simplifies maintenance work



Chief Engineer John Shimpach illustrates the use of the puller as a press. The unit exerts as much as 30 tons of pressure.

ASK JOHN SHIMPACH, chief engineer of the Owatonna, Minn., municipal public utilities! His experience has shown that the handiest piece of equipment that his crews use to keep operations moving smoothly is a hydraulic gear puller.

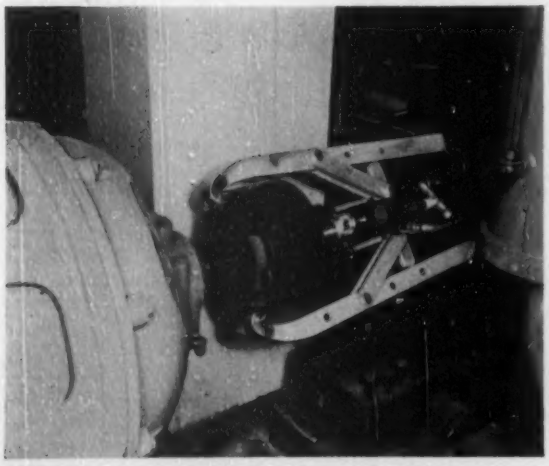
Owatonna's municipal public utilities embrace water, electric power, heat and gas. Consequently, the shop that the city maintains is extensive for the size of the municipality.

Maintenance of the cooling tower provides a good example of the puller's usefulness. The power plant utilizes steam turbines that require a tower to cool the condenser water. Frequently, the propellers in the cooling tower need repair. This means that the propeller has to be removed from the gear-reduction unit. At one time, it was a full half-day's work for two men to pull the cooling tower fan. With the OTC hydraulic puller, one man does the job in less than two hours. The puller is a product of the Owatonna Tool Company, Owatonna, Minn.

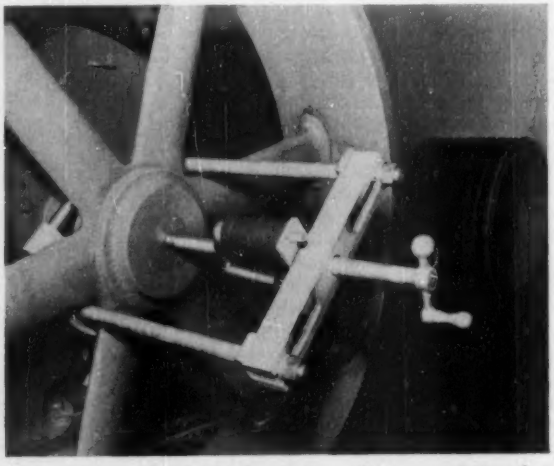
Mr. Shimpach reports that he uses it for straightening shafting, inserting sleeve, roller, and ball bearings, and removing and pressing on both large and small gears.

The ram is interchangeable on the puller so that it can be used either as a stationary press or a portable puller. As a press, it can exert 30 tons of pressure.

In this comparatively small city of 11,000, located in the southwestern part of the state, the saving in man-hours of labor is indeed important. It has also been Mr. Shimpach's experience that this tool pays for itself many times over.



With the proper urging, a flexible motor coupling slides off a motor shaft using a 30-ton powered twin hydraulic ram.



A compressor fly-wheel sheave is easily removed by the hydraulic ram in conjunction with a pulling attachment.

Protect the Public—the Building Inspector's Role

To the Editor of THE AMERICAN CITY:

EVERYONE buying or building a home needs protection on their investment and I have always maintained that it is one of the city officials' duties to protect land values, whether it be a large or small investment. In my two years' experience as building inspector in Oak Park, Mich., I have found that it is usually the man in the low-income bracket who is "fleeced" by the unscrupulous builder. So many of the purchasers are young couples buying their first home and inexperienced in house construction. Unless the building inspector has the means and the ability to eliminate this unscrupulous builder, the purchaser will find out within a year or two that the home which looked so beautiful when he bought it is in need of costly repairs.

The house has begun to settle, the porches pull away from the building, the plaster develops cracks, the roof leaks, the floor begins to squeak and many more defects show up which will cost him plenty to repair. He appeals to the builder and what happens. The builder has sold his mortgage, dissolved his company under which he built the homes, and then tells the owner he has no further responsibility. What does the owner then do? He appeals to the building inspector and, if the inspector was so lax in allowing such poor construction, then he too tells the owner that he can do nothing. From this the inevitable occurs. The owner lets the house depreciate, lives in it the best he can without spending any money on repairs and often lives out the foreclosure period. The house becomes a blot in the area and, if many of these homes were built, it becomes a slum section. The mortgage company hides the defects the best they can for re-sale and then it becomes a buy-and-sell proposition until eventually it is condemned or is inhabited by undesirables.

Inspection During Construction

This is where the building official can render a great service to his community. He can rigidly inspect the houses during the course of construction, paying particular attention to the construction strength of the building, such as footings, walls, beams, joists, rafters, etc. If this part of the house is properly built then the other defects will be minor and not entail much expense to repair.

In my opinion, the building official plays one of the most important roles in the future of a city. He can be lax and allow his city to build into a community which is a discredit to the community, or he can be strict but fair and bring about an orderly growth with nice homes, interested home-owners, and a community anyone will be proud to live in. This responsibility is his and, when such authority is vested in him, he should exercise it to the advantage of the city and not the builder. Full cooperation with the builders is necessary, but it does not mean to the extent that something is sacrificed by the city. This cooperation is appreciated by the majority of the builders, as was evidenced by a letter to builders last year and their response to it. Once the builder is acquainted with the desires of the city officials, it is no problem to have his continued support.

L. L. DAWKINS
Building Inspector
City of Oak Park, Mich.

Windsor, Canada, Begins Work On Downtown Riverfront Development

THE SPIRIT of international friendship between Detroit, Mich., and Windsor, Ont., was once again exemplified in October when Windsor officially started its new civic-improvement project, a downtown riverfront park, a quarter mile long and directly opposite Detroit's multimillion-dollar civic-center development (illustrated on the cover of the November issue of THE AMERICAN CITY).

In a symbolic ceremony, Mayor Albert E. Cobo of Detroit used a chrome-plated mason's hammer to knock a few bricks out of an old Windsor waterfront building, with Mayor Arthur J. Reaume of Windsor as onlooker.

The large-scale wrecking program will not get under way for several weeks, though the City Council of Windsor has passed bylaws which provide a maximum appropriation of $1,500,000 for land acquisition. The new park will be at the foot of Oullette Avenue, the principal business street leading into the downtown area. A new Civic Auditorium is also planned, in conjunction with the downtown park development, as a permanent memorial to Windsor's 100th birthday in 1954. There will be an eight-months-long celebration of this event.

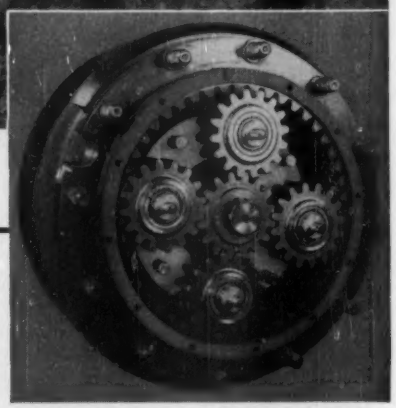
The downtown riverfront development is tangible evidence of Windsor's emergence from the rigors imposed by the depression, when the city's debt reached a high of $34,000,000 at the bottom of that deflationary period. The present debt is $12,000,000—a per capita figure of $97, one of the lowest for large Canadian cities. The city is currently 12 years ahead of its 1975 deadline for clearing up its refunded debt.

Mayor Albert E. Cobo of Detroit taps the first bricks out of one of Windsor's decadent waterfront buildings. With him, from left to right, are Mayor Arthur J. Reaume of Windsor; Harry Rosenthal, general chairman of the Windsor Centennial Festival Incorporated, and W. Donald McGregor, O. B. E., president of the same organization.

NEW 4-WHEEL DRIVE SHOVELOADER

TRADE MARK REG. U.S. PAT. OFF.

HEAVY-DUTY



Four planetary gears, with 3 to 1 gear reduction, coupled with 5.28 to 1 reduction in differential, provide 15.84 to 1 total axle reduction. Use of 4 planetary gears divides gear-tooth loading by a factor of 4, eliminating failure in gear assembly.

★axle strain reduced 300% by planetary gears

One of the outstanding exclusive features in the new Baker-Lull 4-wheel drive SHOVELOADER is the use of 3 to 1 planetary gear reductions in each of the four wheels. This eliminates drive line failures by a 300% reduction of shock loading and strain to axle shafts, differentials, ring gears, pinions, transfer case and transmission. It also substantially reduces clutch wear. Other exclusive built-in features increase utility by providing natural digging action, improved operation in rough terrain, greater operating safety, mobility and general versatility.

write for 8-page descriptive bulletin or ask your Baker-Lull distributor for demonstration.

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How GM Builds Better Community Relationships

THROUGH THE COURTESY of Paul Garrett, vice-president of General Motors, of Detroit, THE AMERICAN CITY has received a copy of a handbook entitled "GM Lives Here," telling of some of the achievements of General Motors plant officials throughout the country in their efforts to fulfill their responsibilities as industrial citizens.

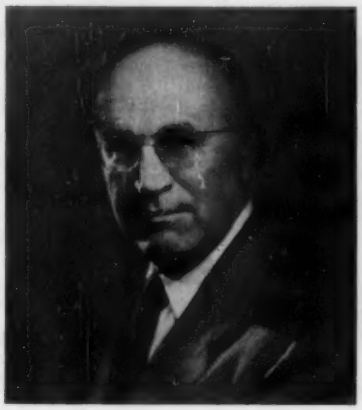
Here are ten of the 67 case examples, summarized in this brochure, of how GM people are helping to build better communities — and, incidentally, better community relationships:

- A Midwestern plant grading the grounds for an adjacent school and contributing equipment for a playground.
- Draining low spots on the property of a Southern plant, thus earning community gratitude for eliminating a mosquito-breeding ground.
- Heating and ventilation engineers of a Midwestern GM plant checking heating plant of a local school, recommending improvements and ways for more economical operation.
- A GM plant manager and his staff making suggestions on the design and construction of a local hospital to meet community needs at a cost community could afford.
- Providing speakers for high-school "Career Days" to give guidance to students to help prepare them for college or for jobs in industry.
- Building two Little League baseball diamonds on company property, complete with backstops and bleachers.
- Making auditorium available for use of the Red Cross and similar organizations.
- Loaning backdrops, platforms, lights, and other meeting props to local welfare organizations.
- Making employee park and playground available on week days during summer to local Boys' Club.
- Taking the leadership in organizing a consolidated campaign to help all the hospitals in the city.

As a result of the distribution of this handbook in GM plant communities, municipal officials and civic organizations may be expected to find GM divisional and plant executives even more ready than heretofore to participate in community-benefit activities.

Filter Company President Becomes Mayor of Ames

JOSEPH P. LAWLOR, president of the General Filter Company of Ames, Iowa, has been elected to the position of Mayor of the City of Ames. He has, at previous times, served as councilman for the city.



Mr. Lawlor was graduated from the University of Illinois in Civil Engineering, served as Captain in the U. S. Army of World War I, and as Commander in the U. S. Navy Civil Engineers Corps, World War II.

In the professional engineering field, Mr. Lawlor has served as follows: 1920—Assistant Manager, Dakota Engineering Company, Mitchell, S. D.; 1921—Estimator, Layne & Bowler Company, Memphis, Tenn.; 1922-1930—Chief Engineer, Layne-Central Company, Memphis, Tenn., Vice-President, Layne-Arkansas Company, Secretary-Treasurer, Layne-Central Company; 1930-1934 — Vice-President and General Manager, Layne-Chicago Company; 1934-1935—Chief Engineer, Thorpe Well Company, Des Moines; 1935 to date—In 1935 organized the General Filter Company of which he is President; 1942-1943 — Assistant Professor of Civil Engineering at the Iowa State College, teaching Surveying, Sewage Treatment and Water Power Engineering.

Ames, a city of some 23,000, was a pioneer in the city-manager plan of government and has been under that form continuously since 1920. The city manager, a council of six members, and the mayor, administer the affairs of the city, including a municipal light plant, water works and treatment, sewage-treatment plant and airport.

Mr. Lawlor's extensive contact with various city government problems should serve him well in his position as Mayor.

As a House Builder Sees The Cost of Slums

THE DECAY OF OUR CITIES is the Number One economic problem of our day. It creates our Number One public health problem; it nurtures our Number One crime problem.

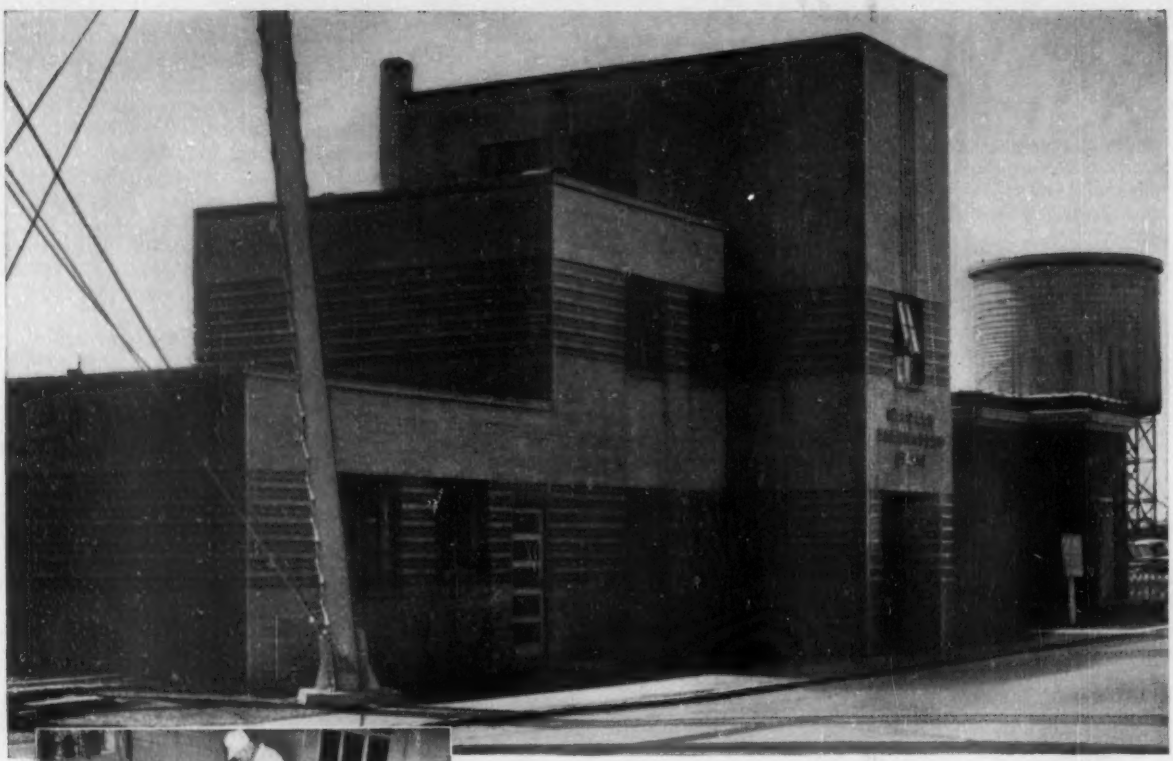
"It is also our Number One human problem, for every blighted neighborhood means thousands of blighted lives. It means that in most cities nearly a quarter of all the people must live crowded in blight and often in squalor, that more than a quarter of the children must grow up without proper safeguards for their health, without adequate space for play and recreation, without half the opportunities which should be their American birthright.

"Conservation and slum prevention must go far deeper than physical reconstruction and modernization of old houses. Even if every substandard dwelling is brought up to par, large areas will soon revert to blight unless we cure the causes that made them slums in the first place — the overcrowding, the unsafe streets, the congestion, the horse-and-buggy traffic pattern, the bad zoning and adverse use of nearby property, the lack of recreational facilities, the lack of local social centers to vitalize neighborhood feeling and pride.

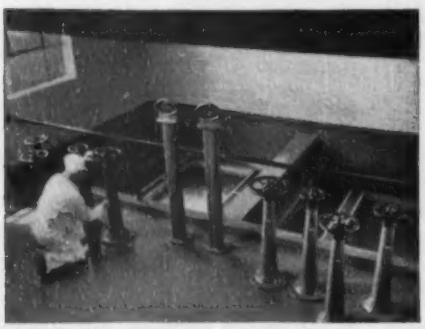
"For so vast a problem, involving so many millions of dollars and so many millions of people, there can be no quick, easy, cheap solution.

"But whatever the cost, this much is certain: In the end it will prove cheaper to do what is necessary to save and revitalize our cities than to let them go sinking into decay and insolvency."

EDITORIAL NOTE: From an address by G. Yates Cook, Director, Department of Housing Rehabilitation, National Association of Home Builders, before American Municipal Congress, New Orleans, December 1, 1953.



Staples' compact Permutit Precipitator has 400 gpm capacity. Softens hard well water, removes turbidity, iron, and manganese.



Two 8' x 9' Permutit Gravity Filters remove last traces of suspended matter, deliver a crystal-clear, softened water.

How *Staples, Minnesota gets soft, clear water*

Staples' well-water supply caused plenty of trouble . . . total hardness 275 ppm, alkalinity 200 ppm, iron 3 ppm, turbidity 30 ppm. To solve these problems, Staples turned to Water Conditioning Headquarters.

Now Mr. E. H. Klang, Supt. of the Water and Light Dept., reports the Permutit-treated water "very fine in all respects—very clear."

Permutit recommended the equipment shown at left, plus a carbonation tank. Turbidity is reduced to only 3 ppm . . . iron to 0.1 ppm. Hardness and alkalinity are reduced to specified requirements. Because of high Precipitator efficiency, each filter is backwashed only once a week for 20 minutes.

"The Precipitator has not given any trouble. The Permutit filter is one of the best . . . has been trouble-free," adds Mr. Klang about the Permutit equipment installed in 1939.

Free Technical Bulletins

Write today for full information on any water conditioning process or problem. The Permutit Company, Dept. AC-1, 330 West 42nd Street, New York 36, N. Y.

WATER CONDITIONING HEADQUARTERS FOR OVER 40 YEARS

PERMUTIT®

Victor Jones

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John Witherspoon

Frank C. Moore

Buffalo Calls in Experts for Conference on Slums

SLUMS AND SUBURBANITIS—A Re-examination of Buffalo's Most Pressing Problems" was the subject of a one-day conference and luncheon December 11, sponsored by the Buffalo and Erie County Planning Association.

The conference was arranged to brief Buffalo's business leaders on civic developments in other cities, and featured six experts from other cities who outlined their experiences in coping with problems similar to those that face the Buffalo area.

President Charles P. Penney of the Planning Association said: "We firmly believe that Buffalo is at the crossroads and that the business leaders of this generation must decide whether this city is going to advance or wither on the vine."

The guest speakers included the following: Dr. Victor Jones, Professor of Government, Wesleyan University; Frederick G. Gardiner, Q.C., Chairman of the Council, Municipality of Metropolitan Toronto; Prof. Burnham Kelly, Director, Bemis Foundation, M.I.T.; Ellick Maslan, Chief of Planning, Chicago Housing Authority; John Witherspoon, Controller, City of Detroit, and Frank C. Moore, President, Government Affairs Foundation, Inc.

Emphasis of the discussions was on metropolitan growth (the suburbanitis problem) and on urban redevelopment (the rebuilding of blighted areas.)

A Plea for the City Beautiful

By CHRISTOPHER TUNNARD *
Director, Graduate Program in City Planning, Yale University
New Haven, Conn.

I COME BEFORE YOU WITH A MISSION—to urge you at the very least to take over the forgotten functions of the Municipal Art Commissions and at the most to do everything in your power to re-introduce the concept of art in the community. There are urgent reasons for this appeal—to bring people back into the city, to prevent them from leaving it in increasing numbers, and to get rid of a slur on our national pride. . . .

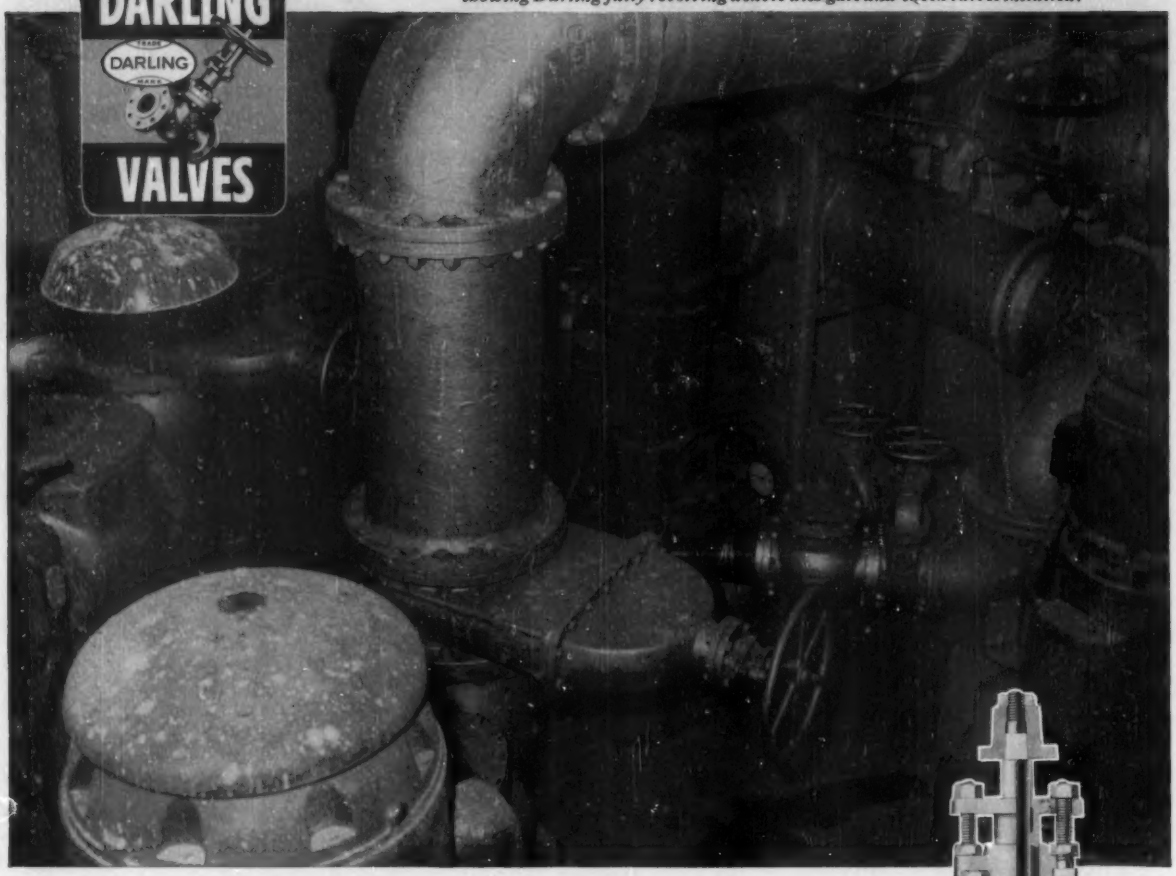
Civic Art is a collaboration of artists to embellish the city; it deals with the *appearance* of the city. I wouldn't exclude opera, pageantry, and music, all of which employ artists in great numbers. The most conspicuous examples of civic art today are to be found in the private or municipal orchestras, to be found in smaller as well as larger cities. *But* a city of over one million people may have an orchestra, but no ballet, no opera, no imaginative civic center, no central park, no fine buildings, no public sculpture. We are lacking in all these forms of public art, by comparison with other countries, and it's *unnecessary*. Here we are—a nation great in material progress and in humanity—and with all these ugly cities—American cities weren't always ugly. Today we substitute a street corner for a public square, a picture magazine for a mural painting. We could do much to make our cities more beautiful and to bring art in all its forms into our lives. . . .

There are going to be tremendous changes in the cities in the next 30 years and it would be a tragic mistake to rebuild them forgetting the concept that the cities are, or can be, man's supreme creation. The cities *could* and *should* pay a conscious tribute to our civilization instead of being an unconscious revelation of it. . . .

Public buildings, streets, and parks all need the inspired hand of the artist, and there is good reason to hope that, as in the 17th Century in France, and in the Federal period in America, the creation of public works of art would encourage private initiative along these lines. On the state and local level we need a revival of Civic Art Commissions—we now have over 2,000 local *planning* commissions in the United States, but they haven't taken on the functions of the municipal art commissions. The ones in New York, Philadelphia, Baltimore, and San Francisco are among the very few left.

We also need instruction in environmental art in our schools to encourage the young to be sensitive about what they see around them, and for some of them, to create the scene itself. We have a few academies of design, but it is time to get away from the over-emphasis on easel painting. We need the muralist in our cities, the mosaicist, public sculpture, a re-emphasis of symbolism, and allegory to touch the springs of national and local pride—and we need these things on the street corner, the housing project, on the very pavement of the city itself. It's my belief that we won't get much public support for improving our cities unless we include in our aim the positive attempt to make them more beautiful.

* Excerpts from a speech at the session on Urban Esthetics, at the National Planning Conference, in Detroit, October 14, 1953.



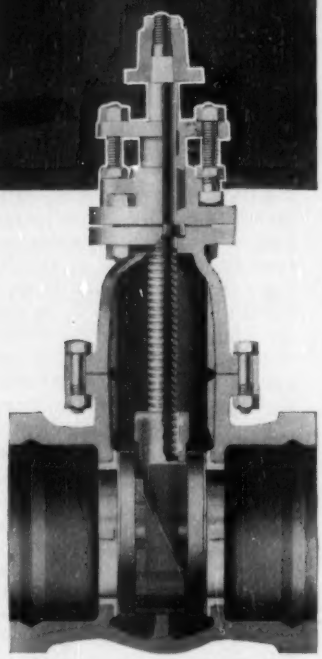
The Wet Well Pump Room in the central control building basement, showing Darling fully revolving double disc gate and check valves installed.

DARLING VALVES in Bethlehem's $5,000,000 sewage treatment plant

THIS new Sewage Authority settling plant, with maximum capacity of 25,000,000 gallons a day, handles the sewage load from 128 miles of Bethlehem, Pa.'s sewer system.

Unique Valve Principle—Darling gate valves, in the "heart of the plant", are closer to being trouble-proof than any you have ever run across. Darling's fully revolving double disc, parallel seat feature compensates automatically for valve body distortion. Tight closure is assured every time. In addition, wear on parts is less . . . and is uniformly distributed. Darlings last longer, require less attention and maintenance.

Valves For Every Need. In water and sewage plants everywhere Darling revolving double disc parallel seat gate valves are setting records for low-cost service. They are available in a wide range of sizes for all normal and unusual service . . . for pressures up to 1500 pounds. Write for all the facts to . . .



Rugged simplicity is the secret of better operation of the Darling revolving disc principle. Just four sturdy working parts . . . two plain interchangeable no-pocket discs and two husky wedges . . . do all the work. With this foolproof assembly of internal parts, maintenance is easy.

DARLING VALVE & MANUFACTURING CO.
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Four Steps to Better Government Of Large Cities

A PLAN FOR ACTION, addressed particularly to the organizational structure of New York City's government, but offering ideas of importance to other large cities, was submitted on September 28 to the Governor and Legislature of the State of New York. This report, entitled "Four Steps to Better Government of New York City," is the work of a Temporary State Commission of which Devereux C. Josephs, president of the New York Life Insurance Company, served as Chairman and Wallace S. Sayre as Director of Research.

The Commission finds that the managerial crisis of New York City requires that the leadership and accountability of the Mayor, as the elected chief executive of the city, should be reinforced and clarified. To that end the Commission makes four recommendations:

1. *City Administrator*

The Commission recommends the establishment of a City Administrator, appointed by and subject to removal by the Mayor, who would serve as the Mayor's second in command over the administrative agencies of the city.

2. *Deputy Mayor*

The Commission recommends that the present office of Deputy Mayor be continued and that the Deputy Mayor perform two important functions: first, that he represent the Mayor, when the Mayor has other and higher priority duties, at meetings of the Board of Estimate and at the meetings of other boards or commissions whenever the Mayor desires to be so represented; second, that the Deputy Mayor assist the Mayor by representing him or arranging for another official to represent him on the many public occasions at which the Mayor should be represented by a high-ranking deputy or city official.

3. *Performance Budget*

The Commission recommends that the New York City government adopt a performance budget system, providing a clear and comprehensive financial plan for efficient and economical management of the city's affairs. The Director of the Budget, under the direction of the City Administrator, should promptly develop this indispensable instrument of efficiency and economy to its full potential in a budget system which closely coordinates both the capital and expense budgets.

4. *A Modern Personnel System*

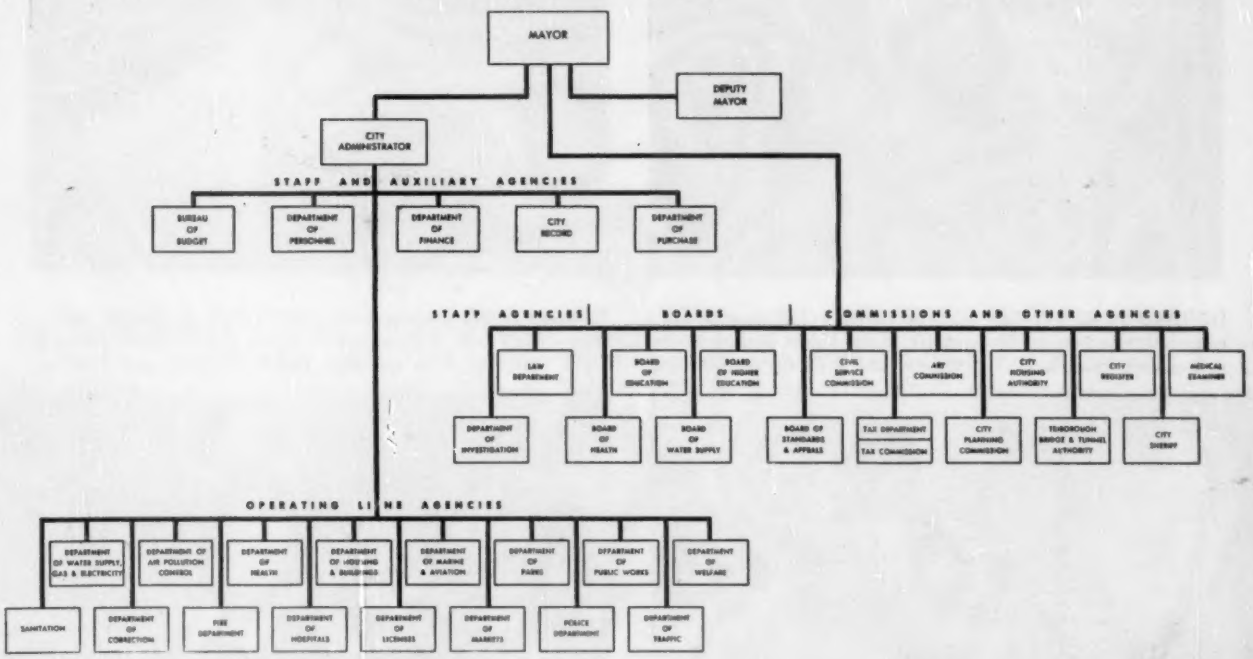
The Commission recommends that the city government promptly begin the development of a new and complete system of personnel administration clearly responsible to the Mayor, safeguarding the merit system and providing an effective career staff for the administrative agencies of the city government. A Director of Personnel, under the supervision of the City Administrator, should be the head of a new Department of Personnel Administration. The Civil Service Commission should become a rule-making, appellate and investigating body.

The report—a 148-page booklet—discusses these recommendations in detail, and presents a draft of legislation to implement the Commission's proposals. An Appendix on "The 'Manager' Idea in Government in the United States" and a bibliography and charts add to the value of the report, copies of which are available at 10 cents each from the Citizens Union, 5 Beekman Street, New York, N. Y.

Local pride ought *above all* to center, so far as its material objects are concerned, about the determination to give the surroundings of the community nobility, dignity, beauty.

JOSEPH ROYCE

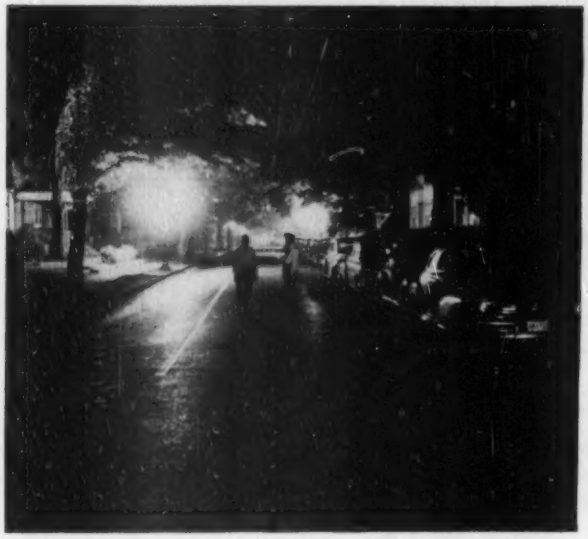
PROPOSED ORGANIZATION
THE MAYOR AND HIS TOP MANAGEMENT AIDES



BUSY INTERSECTIONS are safer for pedestrians and drivers now that the new street lighting has been installed. Indianapolis gave high priority in its street lighting program to areas where accident records indicated the need for lighting was greatest. The hazard to pedestrians crossing streets was also greatly reduced by the new street lighting installations in the critical areas of the city.

NEW STREET LIGHTING CUTS NIGHT

BEFORE



AFTER

LIGHTING PLAN to reduce night accidents in Indianapolis was a cooperative venture by Mayor Clark, right, Police Captain Jacobs, and electric utility's H. T. Pritchard and J. D. Blythe, standing.

DANGER SPOTS needing better street lighting are pointed out by Mayor Clark to H. T. Pritchard, President of Indianapolis Power & Light Company. Pins represent traffic accidents and fatalities.

SUBURBAN HIGHWAYS were among the areas first relighted in Indianapolis. New street lighting has helped cut traffic accident rates and protect pedestrians against robberies and other crimes.

FLUORESCENT LIGHTING has proved a good solution in lighting the city's railroad underpasses. The new lighting provides excellent visibility with minimum glare even at low mounting heights.

TRAFFIC DEATHS IN INDIANAPOLIS

Since the end of World War II, vehicle registration in Indianapolis, Indiana, has soared from 164,000 to 240,000. A carefully engineered relighting program for the city's streets has actually reduced the number of night traffic accidents and fatalities despite this huge increase. In 1946 there were 41 night traffic fatalities; in 1952 there were only 35.

50 MILES OF RELIGHTED STREETS since 1946 is the proud record chalked up by the city government and the Indianapolis Power & Light Company, who own and operate the lights. The Indianapolis Police Department has also played a big part in the program by keeping complete accident records and recommending which streets most need better street lighting. General Electric has supplied filament, mercury-vapor, and fluorescent luminaires for this program.

OTHER BENEFITS from the new street lighting have been the reduction in number of major crimes, and the increased effectiveness of police in detecting lesser offenses at night. On one street there were four cases of larceny or robbery in a nine-month period before relighting, while after relighting there were no such crimes during a comparable period.

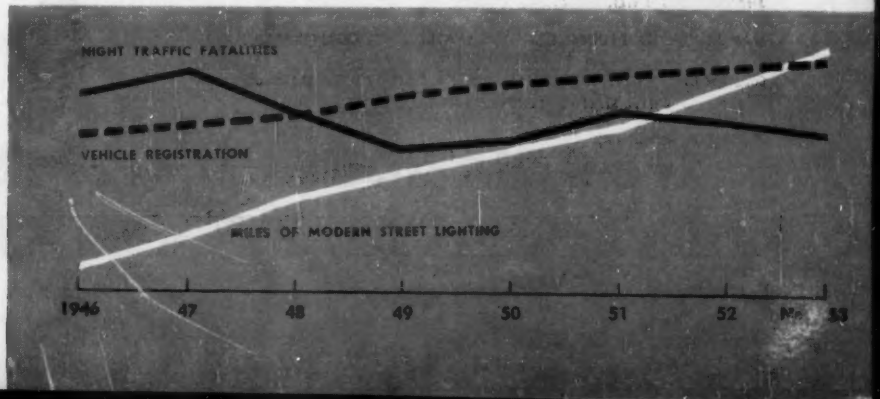
G-E LIGHTING ENGINEERING is helping large and small cities everywhere to reduce their traffic accident tolls and make them safer places to live. G.E.'s broad experience is available to your electric utility to bring better lighting to your community also. For more information write *Section 452-146, General Electric Co., Schenectady 5, N. Y.*

You can put your confidence in—

GENERAL ELECTRIC

NEW STREET LIGHTS were installed in high accident areas first—brought night traffic accident reductions as high as 40%.

FEWER NIGHT FATALITIES has been the real payoff of Indianapolis' long range plan. Even though vehicle registration has increased nearly 50% since the plan was started in 1946, modern street lighting has reduced the number of night traffic deaths by more than 15%.



Thinking about Civic Improvement?

Let's not forget the poles!

CIVIC mindedness has reached an all-time high. Townspeople are proud of their wide smooth boulevards, their modern structures of glass and steel. And they are increasingly sensitive to anything that detracts from the general neatness and beauty of these surroundings.

With their slender grace and hidden strength, steel poles can become an integral part of *your* community improvement program. They bespeak progressiveness, pride, efficiency. They are signs of public service.

NATIONAL Tubular Steel Poles serve in many ways. Their slimness keeps them from being visual obstructions—traffic hazards; no finer lighting pole has yet been designed. When used for trolley wires their strength easily supports the tightest lines, even though steel poles need not be spaced nearly as close together as bulky, old-fashioned standards. And the upkeep on steel poles amounts to practically nothing—an occasional coat of paint at most.

For the sake of civic pride, progress, good business —and for the sake of the town budget, remember NATIONAL Tubular Steel Poles.

NATIONAL TUBE DIVISION, UNITED STATES STEEL CORPORATION
PITTSBURGH, PA.
COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO, PACIFIC COAST DISTRIBUTORS
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

USS

U·S·S NATIONAL *Tubular* STEEL POLES

UNITED STATES STEEL

After being relighted with 20,000-lumen General Electric mercury vapors, which were set on Union Metal standards, Main Street in downtown Dayton, Ohio, looked like this.

You Must Have a Street-Lighting Plan

By H. S. NONNEMAN
Municipal Representative
The Dayton Power and Light Company
Dayton, Ohio

NIGHT TRAFFIC FATALITIES exceeded daytime fatalities for the first time in 1921, according to the National Safety Council. Good street lighting in cities scattered throughout the country has proved an inverse relation between improved street lighting and traffic accidents.

Is there a relationship between *crime* and street lighting? We all have seen public indignation rise after some terrible crime has been committed on a dark street, particularly where a woman is involved, and demand that the area be more adequately lighted. The police can give the facts:

LITTLE ROCK, Ark., reports that all street assaults on women and 66% of car thefts occur after dark.

In OAKLAND, Calif., all purse snatching, 63% of assaults on women, and 60% of car thefts occur at night.

In WILMINGTON, N. C., 70% of all assaults on women were committed under cover of darkness.

LOS ANGELES records show that at night there are twice as many rapes, five times as many assaults, six times as many thefts, and eight times as many burglaries as during the day.

I think we will agree that there is a definite relation between crime and street lighting.

The third need for better street lighting — civic progress — requires little comment. All that is necessary for one to say is that good street lighting *denotes* civic progress. Every merchant knows that a well-lighted store attracts business. So do well-lighted streets and business districts. Good street lighting is *good business* for any community.

There is available for our use a booklet entitled "American Standards Practice for Street and Highway Lighting," prepared by the Illuminating Engineering Society. Those entrusted with the responsibility of installing adequate street lighting should familiarize themselves with the factual guidance in that publication.

Says the booklet: "It is of prime importance that the street or highway lighting system be built from a definite plan based on a comprehensive traffic survey of all roadways under consideration." Thus, the word PLAN enters into our thinking.

Modern Luminaires

In this booklet the street-lighting industry has assembled better tools for our use than ever before. In the American Standards Practice Code there are five fundamental types of distribution curves provided by various luminaires available today.

Type I is designed for mounting over the center of relatively narrow streets. Type II is also for narrow streets, with the luminaire mounted near the curb line. The next type of distribution is medium width, designated Type III, and the luminaire

GETTING ON-THE-JOB EARLIER... IN ALL KINDS OF WEATHER SAVES TIME AND MONEY

High Flotation Lets You Start Your Spring Jobs Early — In-spite-of bad weather!

It's just good dollar sense! Get on the job earlier and work in poor underfoot conditions and you add 30 to 60 working days to your year!

The low ground-bearing pressure of the New Schield Bantam C-35 Crawler makes this possible. Here's a husky, rugged rig that turns in bigger machine results weeks before heavy, more cumbersome rigs can operate on restricted load limit highways.

Available with 9 fast-change front-end attachments, the famous job-proved Bantam is available in a wide variety of mounts tailored to your needs.

Write the Schield Bantam Co., 234 Park St., Waverly, Iowa, TODAY. Ask for free literature or a FREE on-your-job demonstration.

Here's a Bantam C-35 Crawler (⅜ cu. yd.) working in soupy mud in Rahway, N. J. Crawler gets on the job — does its work — gets out with ease. Independent swing and travel speeds digging operation without stopping forward movement.

Front-end fitted as a crane, this Bantam Crawler proves its worth for lifting jobs. 94" overall width allows highway travel without permits. Low ground bearing pressure (only 2½ psi with 32" tread) allows safe travel on normal pavement. Lifting capacity — 5 tons.

— Advertisement

VERSATILE SCHIELD Bantam® DOES MANY LARGE MACHINE JOBS AT SMALL COST

NOW — when budgets require more efficient handling of men and equipment, to make both ends meet, the Bantam is the rig you can't afford *not* to own! The Bantam costs less to buy — costs less to operate — does countless jobs the money-saving Bantam Way . . . offering you many features of big machines, yet providing an all-around excavator that moves from job-to-job with the speed of a truck.

Traffic keeps rolling while Bantam replaces water main in downtown Milwaukee. Crane with clamshell quickly removes old pipe — places new section — refills holes. Maneuvers easily among wires, poles and buildings, without slowing traffic.

Here's the T-35 Bantam with crane, mounted on the new Schield Bantam specially designed Crane Carrier . . . the ideal mount with a 16½' turning radius . . . all new!

Just check a few of these jobs — see for yourself how a Bantam fits your budget requirements.

EXCAVATING: Bantam enables you to handle your own street repairs . . . make sanitary and storm sewer installations and handle spot repairs on existing lines.

MATERIALS HANDLING: Sand and gravel loading and unloading comes natural to a Bantam. Sanitary landfills, maintenance yard material handling, building of water purification systems and sewage bed cleaning — all become 1-man Bantam jobs.

The Schield Bantam is engineered to perform a wide range of work with a host of outstanding features normally found on larger, more expensive rigs. There's a Bantam mounting that suits your particular needs — exactly. There's a crawler for use in mucky and wet conditions. There's a crane carrier for all-new, heavy duty mobile mounting. There's a dependable factory re-built 6 x 6 — and a Bantam can be mounted on your own city truck. Ask for a FREE demonstration — on-your-job! Write for Free descriptive literature — TODAY!

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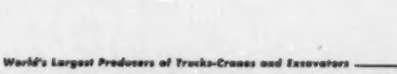

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IMPORTANT Reference for outdoor lighting equipment buyers

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ALL THE FACTS
Steel Brackets and Mast Arms
The UNION METAL MANUFACTURING CO. CANTON OHIO
Catalog No. 82
JUST OFF THE PRESS ...WRITE TODAY!

Required reading for anyone with outdoor lighting equipment responsibilities. A complete catalog of standard Union Metal brackets, mast arms and accessory attachments for poles of every type. Includes mounting instructions and illustrated construction details.

A copy is yours for the asking. Use the handy coupon or write to The Union Metal Manufacturing Co., Canton 5, Ohio.

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THE WISE CHOICE

Built to give "extras" in results

Extra care in the making provides the "extras" in accuracy, sturdiness, dependability and true economy that make Karparks the choice of far-sighted officials. Four models — Superior, Husky, Twin-O-Matic, Unimatic — have every worthwhile feature.

Again Available — The Versatile

Twin-O-Matic

A greater flow of materials makes it possible for many more cities to have this feature packed, two-car parking meter. Write for data.

KARPARK *Automatics*

THE KARPARK CORPORATION, CINCINNATI 6, OHIO
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Karparks are manufactured by The Herschede Hall Clock Co. *makers of America's finest clocks.*

is equipped with a Refractor globe, and mounted at, or near, the street curb. Type IV distribution is adaptable to very wide streets. The luminaire is usually equipped with metal deflectors inside the fixture, and is mounted at, or near, the curb and usually on both sides of the street. Type V distribution is known as symmetric distribution, and is the type of distribution we get from a luminaire such as a round ball glass globe, radial wave luminaire, or the Type IV luminaire with all deflectors removed and a simple diffusing globe used.

Two other types of luminaires, more recently developed, are the mercury luminaire, equipped with a Refractor globe which falls into the Type III distribution class, and the new fluorescent luminaire, which produces a distribution similar to Type IV.

Now for a Plan

In the city of Dayton, Ohio, the street-lighting plan started with a map of the city. From data of the flow of traffic, accidents, and pedestrian counts on all thoroughfares, the streets were classified: Primary Business Streets, Secondary Business Streets, Primary Traffic Thoroughfares, Secondary Traffic Thoroughfares, Residential Streets and Dangerous Locations, where special treatment must be given.

After recommendations to city officials and information given the public from time to time, the plan, as described in THE AMERICAN CITY for October 1951, was approved.

Accomplishment in Dayton

Downtown Dayton 28 years ago was lighted with round ball globes on 12-foot poles, with little of the light on the streets. About 1925 we raised the height of the light source to 14 feet and installed an incandescent lamp of 15,000-lumen intensity that produced an average of 0.76 foot-candle on the street.

Two years ago, officials started to relight the city by raising the light source to 28 feet and using 20,000-lumen mercury-vapor lamps. Average intensities on the downtown streets were found to be about 3.5 to 4 foot-candles, with as high as 5 foot-candles recorded on some of the narrower streets. These levels of light are, of course, much higher than minimum requirements and represent intensities higher than are usually found in America today.

Our primary thoroughfares are 100% completed, and we are now at work on secondary thoroughfares, with 30% completed. The next part of the plan will be the improvement of our residential streets, on which 2,500 additional lights will be installed.

Dangerous areas have been given special treatment. Underpasses are lighted by fluorescent fixtures of a new design. All railroad crossings and dangerous curves and intersections have been marked for the installation of sodium-vapor lighting units, which seem to reduce night accidents at such places.

Let us not overlook street-lighting problems in a fair-sized community, for a person is just as dead in a village when becoming a traffic fatality as in a large city.

The company I represent has a program for the improvement of street-lighting conditions in smaller communities. Their needs are studied and a plan is presented to the councils of these small towns, just as it is in the larger cities. The improvements have been carried through in villages with populations of 2,000 and in towns of 5,000 inhabitants.

The downtown area of Eaton, Ohio, was formerly lighted with two 4,000-lumen lamps mounted on 20-foot steel poles. After using the new and more efficient tools provided by us, this same area took on a big-town appearance.

Let us look at an even larger city that adopted a plan and installed new equipment throughout the entire city, including mercury lamps in its downtown area, increasing the intensity of the street about 300% over the former out-dated equipment.

Fluorescent Street Lighting

The use of fluorescent street lighting, in my opinion, marks the greatest advance in lighting since the introduction of fluorescent lighting for interiors some 20 years ago. Contiguous to Dayton is the municipality of Oakwood. Its shopping area looked ideal for fluorescent lighting. The main street has a median strip throughout its entire length, and was poorly lighted considering the density of vehicular and pedestrian traffic.

Poles were installed in the median strip on about 90-foot centers, with two fluorescent luminaires per pole. This installation really caught the eye of the layman. City manager A. B. Berman described it in the May 1953 issue of THE AMERICAN CITY under the title "Spectacular Fluorescents Attract Business."

Municipal Street Lighting Practices Surveyed

VARIOUS IMPORTANT FACTS regarding street lighting today are contained in a report covering 276 cities ranging from Mount Vernon, Texas (population 1,000), and Edgewater, N. J. (population 3,000), to Detroit and Philadelphia. The street-lighting system is owned by the municipality in 72 cities, by the private power company in 152 cities, with the city or the utility each owning a part of the equipment in 49 cities.

Electric street lighting began with the "arc" lamp, which by basic design was a series circuit. The series incandescent lamp allowed the use of existing circuits, and they were adapted to it. These circuits are the established method and are particularly good for smaller lamps over a large area. Increasing investment costs and lamp improvement later made multiple lighting attractive, particularly for larger lamps and in built-up areas where the trend is now to multiple systems. Such systems are particularly desirable for mercury-vapor lighting. Of 97 cities reporting, 51% of the systems are of the series-circuit type. Only about 8% are of the multiple-circuit type, while 41% use both series and multiple circuits.

Five methods of controlling or regulating street lighting were reported. Time clocks are used in 193 cities, photo-electric in 120 cities, pilot wire in 61 cities, carrier relay in 30 cities, and manual in 19 cities.

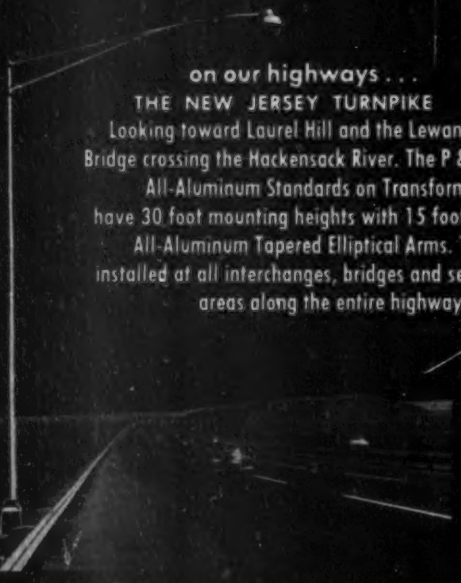
Group replacements of lamps are made in 43% of the cities with the trend toward this method, except for mercury-vapor lamps. Glassware is cleaned annually in 57 cities, semi-annually in 54 cities, quarterly in 15 cities, and on some other schedule in the remaining cities.

Street-lighting extensions are usually financed from the revenues of private power companies, or from general fund revenues of the municipality. Special assessments and state-shared motor-vehicle revenues are sometimes used. Of the street-lighting systems owned by municipalities, 55% report that street-lighting extensions are financed exclusively from general funds and municipal electric utility revenues. Fourteen municipalities that own

in our plazas,
parking areas, shopping centers and drive-ins
NEWARK AIRPORT
P & K Double and Single Tapered Elliptical Arm type standards installed here have 25 foot mounting heights, TB-2 Transformer Bases and 12 foot arms. Four 20 foot floodlight poles with twin projector assemblies are also installed. They are in perfect harmony with Newark Airport's recently modernized appearance and efficiency.

the P&K story

in our communities . . .
LEVITTOWN, PENNSYLVANIA
Scheduled for completion by the end of 1954, Levittown, Pa. will be the state's tenth largest city! Its streets will feature modern, efficient lighting provided by more than 4,000 P & K All-Aluminum Standards and Brackets: 20 foot pendant type with P & K Tapered Elliptical Lighting Arms.



on our highways . . .
THE NEW JERSEY TURNPIKE
Looking toward Laurel Hill and the Lewandowski Bridge crossing the Hackensack River. The P & K All-Aluminum Standards on Transformer bases have 30 foot mounting heights with 15 foot All-Aluminum Tapered Elliptical Arms. They are installed at all interchanges, bridges and service areas along the entire highway.

P & K ALL-ALUMINUM STANDARDS AND BRACKETS ARE PRODUCED IN DESIGN AND TYPE TO MEET EVERY ROAD, HIGHWAY, AREA OR FLOOD LIGHTING REQUIREMENT. They are always the wisest investment for both efficiency and economy:

- Much lighter weight for easy handling and low cost installation
- Negligible rate of corrosion for longest service life
- No painting means initial and year-after-year saving
- Easily salvaged and re-used in event of knockdown

WRITE FOR LATEST P & K CATALOG . . . and use the P & K planning and advisory services without obligation.

Pfaff & Kendall
84 Foundry Street
Newark 5, New Jersey

their street-lighting systems finance extensions either in whole or in part, by special assessments.

Forty-five per cent of the municipalities reporting their experiences with the operative cost of mercury-vapor street lighting, as compared with incandescent lighting, say it is higher, while 55% say it is lower.

Mercury Vapor Popular

Virtually all municipalities report that mercury-vapor street lighting improved traffic safety, with only two dissenting. The opinions, of course, are those of the individual reporting and do not necessarily reflect the official opinion of the municipality. It is interesting to note that 27% of the municipalities reporting indicated that they had received color complaints from the public concerning the mercury-vapor street lights that had been installed in the mercantile district.

Approximately 90% of the municipalities reporting indicated that the public reaction to mercury-vapor lighting was favorable. The type of ownership did not seem to have a bearing on the opinions expressed with regard to the public's reaction to mercury-vapor street lighting. Only five municipalities out of 79 indicated that no additional installations of mercury-vapor lighting would be made.

Municipalities that have no mercury-vapor street-lighting installations at this time were asked whether they expected such installations to be made in the foreseeable future. Of the 73 responding, 30% said they expected such installations will be made. The results of the survey indicate that municipally owned systems that have not yet installed mercury-vapor street lights, expect that such lighting will be installed on a wider scale than in privately owned street-lighting systems.

Fluorescent street lighting is still undergoing development. Oakwood, Ohio, and Detroit, Mich., have large fluorescent installations. Fort Wayne, Ind., has some installations at underpasses and at isolated corners. Some municipal electrical engineers predict a marked trend within the next 10 years toward fluorescent lighting in business areas and on heavily traveled streets. It is also believed that the public's acceptance of such lighting will be higher because of the lack of glare.

EDITORIAL NOTE: This survey, *Special Report No. 16* (July 1953), *Municipal Street Lighting Practices*, is published by the American Public Works Association, Chicago 37, Ill.

Swetland Manager of G-E Illuminating Laboratory

R. M. SWETLAND has been appointed manager of the General Electric Company's Lighting and Rectifier Department Illuminating Engineering Laboratory at Lynn, Mass., according to F. D. Crowther, department manager of marketing.

Mr. Swetland, a nationally known street-lighting authority, has made municipal and utility leaders throughout the land aware of the need for adequate lighting in their communities through his surveys of the nation's major cities. Many of America's streets are today lighted in accordance with his recommendations.

Increasing Popularity of Mercury Vapor Lighting Shown by Increased Use

TRAFFIC ACCIDENTS have been cut an average of 35% during the last five years by seven major American cities in those areas illuminated by mercury-vapor lighting, according to a survey made by the Jefferson Electric Company of Bellwood, Ill.

The cities and the percentages of decrease are: Des Moines, 90%; Richmond, 47%; Dallas, 36%; Cheyenne, 34%; Denver, 18%; Reno, 15%, and Atlanta, 4%. Three cities reported a decline in the crime rate in those areas covered by the blue-white light. Atlanta cut its crime rate 50% in those areas. Columbus, Ga., reported a drop of 90%. Since Des Moines installed mercury-vapor lights, no major crime has been reported in those areas covered by the light.

Authorities responding to Jefferson's survey of 65 major United States cities in 28 states and the District of Columbia estimated that the use of mercury vapor in their cities should increase an average of 50% in the next five years, double by 1953, and amount to 2,000 miles.

Reasons given for the expanding use of mercury vapor are: Greater protection to pedestrians on walks and crossings; does a better job of lighting at less cost; approved by the public; better street lighting; public likes the modern look, and better protection to homes and property.

Seattle will have about 400 miles of mercury vapor in 10 years. Dallas will probably double its present 22 miles by 1958. About 200 miles of Houston streets will be illuminated by mercury vapor by 1963. Chicago authorities indicate they expect to have nearly 200 miles of mercury vapor. Boston and Philadelphia expect a 300% increase within five years.

Atomic Energy Turned on Painesville's New Street Lights

RADIOACTIVE COBALT-60, used in treating deep-set cancer, turned on the new Painesville, Ohio, street-lighting system.

The atomic material, brought by a G-E nucleonics engineer from Oak Ridge, Tenn., activated a Geiger counter which was wired to a starter mechanism so that when enough radioactivity was built up the mercury-vapor street lights automatically went on. This was the first step in Painesville's relighting program, replacing a system which has been in continuous use since 1914. Ninety-four General Electric color-improved mercury-vapor luminaires were installed in the downtown section. Plans call for filament-type luminaires to light secondary arteries and residential streets.

"The prime reason for installing the new lights," said Paul D. Cook, city manager, "was civic pride. We firmly believe that the benefits that accrue to a well-lighted city add considerably to the progressiveness of that community."

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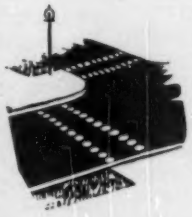
Through the Worst of Weather and Wear . . .

Proven best, time and time again! Prismo has been tested through the years in all situations, all weather conditions . . . by day and by night, in rain and fog, sleet and snow. Countless road tests established conclusively that Prismo striping with "Moisture-Proof" and other exclusive features is far more durable than any other. Lasts several times longer than ordinary traffic paint! Prismo is impervious to weather . . . resistant to the heaviest and fastest kind of traffic . . . for years!

For long-range quality and economy, immediate and long-lasting brilliance, buy Prismo . . . the acknowledged leader.

AND YOU CAN RELY ON THESE PRISMO PRODUCTS FOR THE SAME DEPENDABLE SERVICE!



PLASTIX

The most durable reflective material for cross-walks and other pavement markings. Sections of brightly reflective plastic are permanently affixed to streets by a strong plastic adhesive.

REFLECTO-KIT

The best reflective material for road signs! An improved plastic binder combined with "Moisture-Proof" reflective glass spheres of long-lasting brilliance. No maintenance required. Can be applied in the field or shop. Economical!

PRISMO

The SPHERE of SAFETY

SAFETY CORPORATION

HUNTINGDON • PENNSYLVANIA

Vertical Parking

By CHARLES W. LERCH
Charles W. Lerch & Associates
Chicago, Ill.

WHETHER A CITY be large or small, its basic need for economic well-being is free and unhampered street circulation. The wellsprings of traffic congestion are largely at the residences of our population, in private, single-family dwellings, apartments, and hotels. These make up the streams which form the rivers of traffic flowing into the business districts of our cities. There is always some through traffic, and in our larger cities is added a flood of intra-city traffic that hits daily peaks during morning and evening rush hours.

Only by planning for the entire problem can free movement of traffic and adequate parking facilities for our business districts be provided. The very living habits of all our people are encompassed in the traffic problem. We must consider, for example, the hours that we work, eat, and play, go to the market place or theater, the number of automobiles, the size and kind, and all other means of transportation and their interrelated needs.

The pressing need for a solution of the traffic problem is being reflected in new zoning and parking legislation, enacted to assure better use of our streets and alleys. The shortage of off-street parking space must be dealt with as a major part of the over-all traffic problem.

Parking facilities divide into (1) curb, (2) vacant lot, (3) ramp garages, (4) elevator garages, (5) semiautomatic garages, (6) automatic garages. The first four enter into consideration here only as compared with automatic garages. Three different types of garages are receiving study by engineers—the ramp type, the semi-automatic type, and the operatorless and fully automatic.

Ramp-Type Garages

There are about seven different kinds of ramps used in ramp garages and there are three different methods of operating a ramp garage. A ramp may provide full attendant service where a car jockey receives and delivers the cars; customer-attendant service where the customer drives the car to the floor where it is to be parked, and an attendant places it in a stall; and the customer service garage where the customer drives the car to a particular stall and receives it at that stall. A ramp garage requires 40 to 65 square feet of land area per parking stall, while an automatic garage can be built to use as little as 6 square feet of land per parking stall.

Semiautomatic Garages

There are two types of semiautomatic garages in use today. One is known as the Pigeon Hole type and the other as the Bowser type. Both systems use a two-directional elevator that moves horizontally on tracks —one from above and one from below. While the elevator carries the automobile vertically, the whole elevator hoistway is in a movable structure and can be moved horizontally in either direction. In this way one elevator can serve as many vertical tiers of stalls as desired.

Three major differences are apparent in these two types. The Pigeon Hole type has lever controls on the elevator platform operated by an attendant, while the Bowser type has a push-button control station on the platform operated by the car driver by extending his arm through the window of the automobile he is parking. The Pigeon Hole type has a mechanical car-loading device for loading and unloading the automobile, while in the Bowser type the attendant drives it off and on the elevator. The Pigeon Hole elevator hoistway structure is supported from the bottom of the hoistway, while the Bowser is suspended from the top. Both structures move horizontally on steel rails similar to those used on railroads.

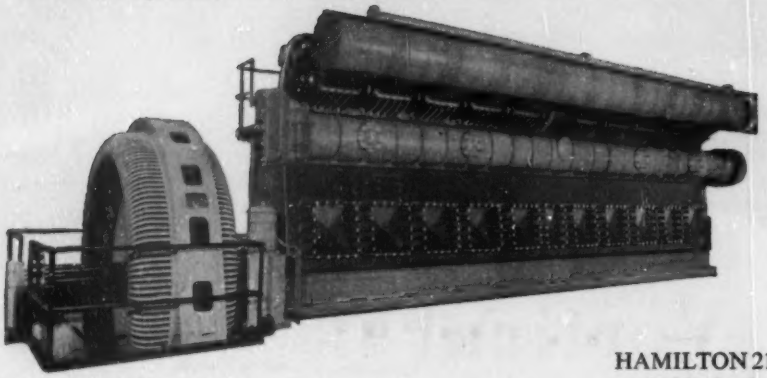
About six Pigeon Hole garages have been built and while a number of Bowser garages have been sold, only one has been built.

Operatorless Automatic Lifts

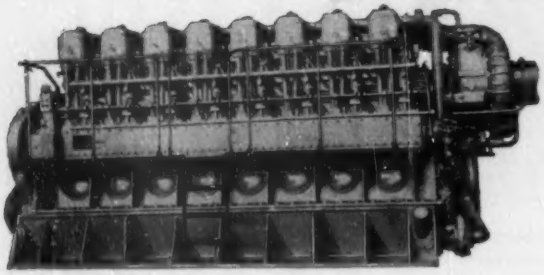
The two systems available today are identical in principle, although very different in design. They are known as the Alkro and the Park-O-Mat systems, the latter system being the only one built and in operation a little over a year.

Each system employs fixed elevator hoistways with only two exits (one at each end or side of the lift) on each floor. Each employs fully automatic car positioners (placed on the lift platform) for unloading and loading the automobile. They are both automatic button controlled from the lower terminal landing outside the hoistway lift. No one rides the lift at any time. The attendant remains at his control station on the first floor where he can operate two or more lifts for parking or unparking automobiles automatically.

This whole subject is discussed in a 12-page illustrated brochure, "Auto Parking," available without cost from Charles W. Lerch & Associates, 1172 Board of Trade Building, Chicago 4. Land use and cost and the cost per stall exclusive of land cost, as well as operating costs, are among the factors covered.



HAMILTON 21½ x 27½—Diesel and Dual Fuel Engines available in 5 to 12 cylinders with a net horsepower range from 2250 to 5450.



BALDWIN 600 SERIES—12¾ x 15½ turbocharged Diesels with 6 or 8 cylinders developing 620 to 1750 hp at 514 to 625 rpm.

ECONOMICAL DIESELS YOU can depend on

For consistent savings in operation and maintenance you can rely on these Baldwin-Lima-Hamilton Diesel Engines. In marine or stationary use you benefit from these inherent characteristics . . . low weight per horsepower . . . rugged construction . . . high efficiency over a wide range of output.

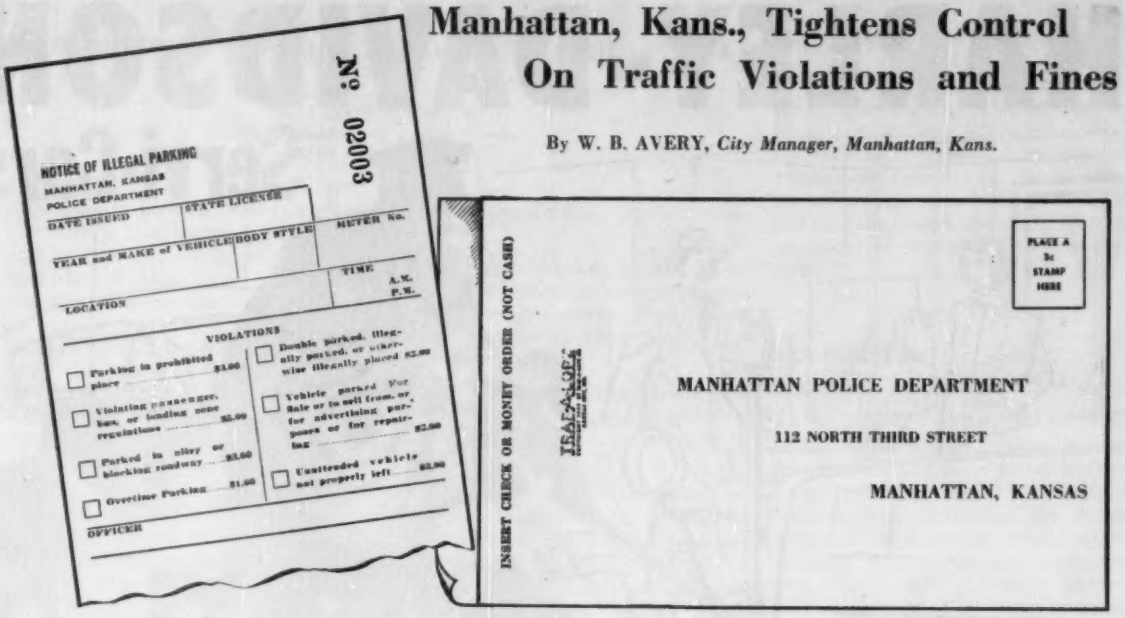
For more facts about these thrifty, dependable B-L-H Diesels, please write us, indicating the speed and load range and the application you are interested in.

Hamilton Division
Hamilton, Ohio

BALDWIN - LIMA - HAMILTON

Manhattan, Kans., Tightens Control On Traffic Violations and Fines

By W. B. AVERY, *City Manager, Manhattan, Kans.*



Over half of all Manhattan's parking fines are collected through the mails by means of this Traf-A-lope ticket.

MORE adequate financial controls over police fines and collections were adopted by the City of Manhattan, Kans., late in 1952, and several new procedures and forms were adopted. First, three new tickets replace the stub tickets and the old "notice to appear." Each set of tickets is pre-numbered, and contains a carbon, a second copy, and a tissue copy which remains in the book for auditing purposes. All parking violations are included on a Traf-A-lope ticket, the second copy being an envelope that can be used by the violator for payment if he does not wish to appear at the police station. The second form called "notification of arrest," is issued for all minor infractions of the traffic laws. A person receiving such a ticket must set minimum bond at the police station, but need not appear in court unless he desires. This particular ticket, it is hoped, will cut down the number of minor traffic cases passing through the police court every week. The third ticket, "traffic violation summons," is issued in all cases where the officer feels the violation is serious enough to warrant a court appearance. The only deviation in the usual laws pertaining to traffic violations is in the case of overtime parking, where a violator is allowed two tickets free but must pay $3 for the third within a year.

Another innovation is an amendment to the traffic ordinance which establishes minimum bonds for every traffic violation and empowers the desk sergeant, in the absence of the police judge, to set minimum bond. This has tended to reduce wide variations in bonds set for the same type of violation.

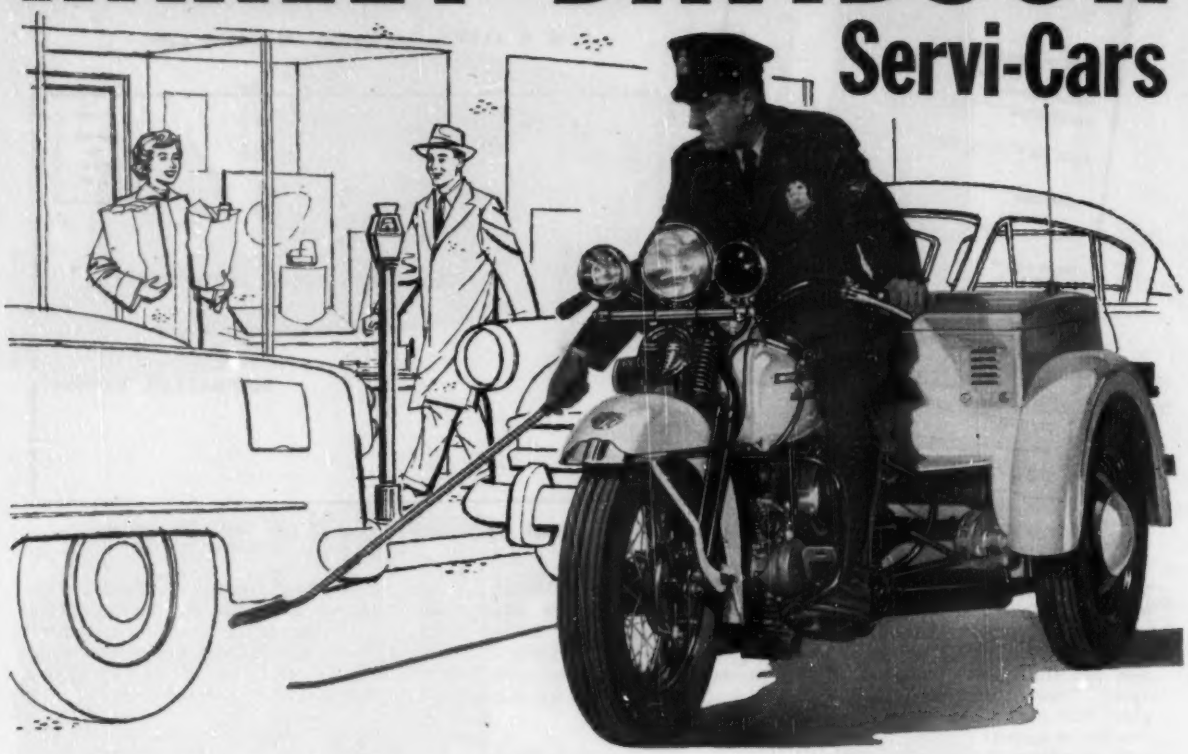
Finally, the third copy of each receipt for money collected by the police department now accompanies the collection to the finance office, and is filed there. A monthly report prepared by the department lists all violations by the receipt number, and thus can be easily checked by the finance office for any discrepancies.

As regards the most unique feature of this system, the Traf-A-lope parking tickets, over half of all parking fines are now collected by mail.

Two Motorcycles Set the Pace

On the Los Angeles Freeway System last summer, a crackdown on speedsters exceeding the limit of 55 miles per hour netted 727 drivers in six days. Even after that period, more than 40 Harley-Davidson motorcycles were used to patrol the system. The photograph shows the restraining influence of the motorcycle policemen, traveling in pairs. The motorists behind them kept the pace with few attempts at competition.

HARLEY-DAVIDSON Servi-Cars



...help solve "Meter Hog" problem

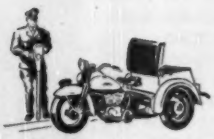
Every city, large or small, faces the problem of motorists violating parking regulations by "stuffing" meters every hour.

However, there is a simple, dependable and efficient way to control these "Meter Hogs." The mounted officer on a Harley-Davidson Servi-Car can mark automobile tires easily as he patrols his beat . . . providing an accurate check of motorists who use more than their share of allotted parking time. What's more, the Servi-Car gives the patrolling officer an unobstructed view of parking meters.

Join the thousands of communities that help merchants and motorists alike by moving cars out of metered areas on time. With the compactly designed, sturdily built Harley-Davidson Servi-Car, your city can enjoy uninterrupted, dependable parking and traffic control.

Ask about the Harley-Davidson Servi-Car at your dealer's. And write for free booklet, "More Effective Police Power."

HARLEY-DAVIDSON MOTOR CO.
Milwaukee 1, Wisconsin



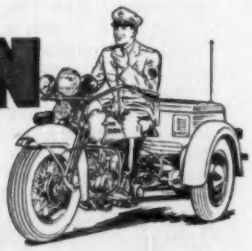
Checking and servicing parking meters.

Marking parked cars.

Controlling congested traffic.

Protecting school children.

HARLEY-DAVIDSON
Motorcycles POLICE Servi-Cars
BETTER TRAFFIC CONTROL



Commuter Parking in Valley Stream, N. Y.

By PERCY SPRAGUE
Superintendent of Public Works
Valley Stream, N. Y.

THE modern metropolitan suburban community has many problems to cope with, and none is more urgent than that of developing some effective measures to cope with "commuter parking." Our community is the first residential area east of the New York City line on the Rockaway, Montauk Division of the Long Island Rail Road, a 25-minute ride from Pennsylvania station. Our population, 14,000 in 1940, is now 35,000, and 8% commute.

One of the most difficult factors with which many a village has to contend today, is to find adequate available space to develop for parking.

There are two L.I.R.R. stations used by our commuting public. At the Valley Stream station there are 1,974 daily commuters with monthly commutation tickets; at Gibson station there are 679.

Free for Commuters

At the Valley Stream station the village maintains three public fields which serve 384 cars. One field is for one-hour parking; a second field, for commuter parking for *residents* of Valley Stream, allows all-day parking free. To park here, a "village sticker" is obtainable at the Municipal Building, at no cost. The third field, accommodating 113 cars, is metered at 25 cents a day and is for anyone desiring to park.

Whenever field No. 2 is filled, Valley Stream commuters may use field No. 3 without charge, their cars being identified by the "village sticker" on a window. An additional 154 cars find parking space under the L.I.R.R. structure, and 70 are accommodated by adjacent street curbs. No parking charge is made by the village or the railroad.

At Gibson station the village maintains a 36-car field for commuters. We have available for future requirements an additional area of 20,000 square feet. Around the station the L.I.R.R. accommodates 56 cars. No charge is made for parking in any of the Gibson fields at present.

Village-owned commuter parking fields, including purchase price, development, and legal and engineering fees, cost an average of 50 cents per square foot, or $134 per car space.

Any commuter community might consider thoughtfully these three factors:

- Where railroad structures are to be elevated, insist on supporting columns rather than solid walls, so as to enable cars to park under the structure.
- Provide that the municipality be empowered to permit parking under such elevated railroad property, if it is deemed essential.
- As far as practical, commuter-parking fields should be located so that the commuter may park in an area convenient to the entrances to the station. This is so important for that early morning period when frantic commuters rush down as the little train draws into the platform area.

Far-Side Bus Stops

To the Editor of THE AMERICAN CITY:

I HAVE NOTED with interest the article on page 129 of the November 1953 issue of THE AMERICAN CITY entitled: "Far-Side Bus Stops Cut Accidents in Tucson."

We, at York, Pa., adopted this sound procedure several years ago, and I feel a measure of satisfaction that I consistently advanced this project since 1946 in public meetings, letters to the City Administration, and in newspaper articles.

The more rapid coach operation should interest the owners of city transit systems.

JAMES KERR TOWERS
Registered Professional Engineer
York, Pa.

3-D Traffic Film

THE FIRST three-dimensional films made in the traffic-safety field were shown October 21 at the 41st National Safety Congress and Exposition in the Congress Hotel, Chicago. They depict situations encountered in driving: A child running out into the street from between parked cars; two cars meeting at a cross street; a bicycle rider pedaling out into the street from a driveway behind a parked car; a driver getting out on the wrong side of car, and shots of driving in traffic.

The 3-D system used by Academy Film Productions, of Chicago, requires only one standard 16mm projector plus a special 3-D projection lens, polaroid glasses, and a silver screen. Total cost of these 3-D accessories is approximately $250—"A very small investment considering the tremendously greater teaching impact of the 3-D medium," says Bernard Howard, president of Academy Film Productions.

Special Traffic Court Opened in Norfolk, Va.

To the Editor of THE AMERICAN CITY:

DISTURBED by the increase in traffic accidents and determined to curb reckless driving, the City Council of Norfolk, Va., authorized the establishment of a special court, as of January 1, 1954, to deal primarily with traffic cases and to be known as Police Court, Part II, said court having full police jurisdiction.

Because Police Court, Part I, which currently hears traffic cases one afternoon per week, is so crowded with other cases, the violators of traffic laws have been allowed, heretofore, to settle their cases simply by paying their fines ahead of court time at police headquarters. This system is ineffective because most people drop in at the Traffic Bureau in Police Headquarters and pay their fines practically at their own convenience. Traffic-law enforcement has suffered greatly under these conditions. Since January 1 all persons charged with moving traffic violations appear and stand trial in the new traffic court, which sits six days a week. The personal appearance of the violator in court gives the special traffic court its value.

The purpose of the court is not only to deal out punishment, but also to educate offenders. The education program includes movies to instruct the offenders on their violations. Liaison between the judge, traffic engineer, and director of public works is part of the plan.

H. H. GEORGE, III
City Manager
Norfolk, Va.

Why start with TWO STRIKES against you?

Why not start with DUALS ...make everyone happier!

First time installations? Remember: DUALS are *quality* meters . . . precisely made, finest materials . . . everything DUAL knows how to do to make its meters work smoothly, please taxpayers. And that's a lot of know-how, because DUAL's been at it a *long* time!

Write today for information on SINGLE or DUBL-DUAL parking meters for on-street or off-street service—the modern meters with "drop-start" automatic action and selective gearshift time adjustment.

Helpful, detailed literature is available. Write *The Dual Parking Meter Company* (subsidiary of The Union Metal Manufacturing Co.) *Canton 2, Ohio.*

DUAL the Oriqinal...

the Friendly **PARKING METER**

Uniontown, Pa., Evolves "Work Program"

ONE WAY TO EVOLVE a popular and ambitious "program of work" for a community was demonstrated recently in Uniontown, Pa. (1950 population, 20,471), where a Town Hall meeting was sponsored by the Greater Uniontown Chamber of Commerce. About 110 citizens attended to discuss the subject: "What This Town Needs," and to vote as follows on those projects which they considered sufficiently important so that they themselves would be willing to work toward their realization:

1. More industry and greater diversification
2. A continuous program for better management-labor relations in the Uniontown area
3. Citizenship and Americanism—with emphasis on racial and religious understanding
4. A community center building
5. Development of community spirit and civic pride
6. A better youth recreation program
7. A vocational high school
8. Public parks and a public swimming pool
9. Better law enforcement
10. Revitalizing of city planning and improvements
11. A community-wide industrial foundation
12. A Community Council of clubs and organizations.

Hazelton's "Paint the Town" Contest

A "PAINT THE TOWN" CONTEST, jointly sponsored by the Greater Hazleton, Pa. (35,491), Chamber of Commerce and the Hazleton Art League, has provided a traveling "showcase" not only for the work of local Hazleton art talent, but also for the community itself. Why? Because each canvas submitted for contest judging depicted one or more phases of Hazleton's industrial complex.

The Greater Hazleton Chamber explains, "The purpose of this contest was to allow people in the community to paint their own thoughts on various aspects of industrial life in our community, and through this organization we presented them with numerous titles which we felt would be sufficient, such as labor, education, existing industries, available sites, transportation, etc."

Of 98 paintings entered in the contest, 35 were selected; these are now on display in various retail-store windows; and the sponsors hope to be able to offer the selections "in the form of a traveling art show to be placed in banks and other similar buildings in large metropolitan areas so as to show the industrial advantages of locating in the Greater Hazleton Area."

—From the November 1953 *Newsletter* of the Chamber of Commerce of the United States.

IF

IF everyone who drives a car could lie a month in bed
With broken bones and stitched-up wounds, or fractures of the head,
And there endure the agonies that many people do;
They'd never need preach safety any more to me or you.

IF everyone could stand beside the bed of a close friend,
And hear the doctor say, "no hopes," before that fatal end,
And see him there unconscious, never knowing what took place,
The laws and rules of traffic I am sure we'd soon embrace.

IF everyone could meet the wife and children left behind,
And step into the darkened home where once the sunlight shined,
And look upon the vacant chair where Daddy used to sit,
I'm sure each reckless driver would be forced to think a bit.

IF everyone would realize pedestrians on the street
Have just as much the right-of-way as those upon the seat,
And train their eyes for children who run recklessly at play,
This steady toll of human lives would drop from day to day.

IF everyone who drives a car would heed the danger signs
Placed by highway engineers who also marked the lines
To keep the traffic in the lane and give it proper space,
The accidents we read about could not have taken place.

AND last — if he who takes the wheel would say a little prayer,
And keep in mind those in the car dependent on his care,
And make a vow and pledge himself to never take a chance,
The great crusade for safety then would suddenly advance.

S. SAM TAYLOR • CITY TRAFFIC ENGINEER • SALT LAKE CITY, UTAH

Reproduced from the October 1953 issue of the *Fireman's Fund Record*

Walk, don't ride

. . . in case of an atomic attack, advised former Governor Val Peterson, head of the Federal Civil Defense Administration. The Governor discussed this civil defense measure at the Congress of the American Public Works Association held recently in New Orleans.

The load on public transportation would be too heavy to allow motorized evacuation during an atomic attack. Moreover, the access roads would have to be reserved for military purposes. Aged, infirm, and nonambulatory persons would be removed before the attack, as was done in England during the last war. Plans of this nature have to be considered, Governor Peterson urges, so long as our present defenses still will intercept only three out of 10 planes.

Civil defense measures such as this have their constructive, peacetime aspects, he explains. This was proven when natural disasters struck Waco, Texas; Sioux City, Iowa; Flint, Mich., and other localities.

DEPENDABLE, ECONOMICAL EASY TO USE!

MODEL 12

The only Striper specifically designed for reflective marking materials. The only machine engineered to handle reflective binders, compounds and plain traffic marking — heavy or light — with the same high degree of efficiency and ease.

WALD REFLECTO-LINER

MODEL 8

This amazingly versatile new Striper is the answer to *all* traffic marking in small towns and cities. Specially built for easy, simplified operation — with most of the advanced engineering features found in the larger Model 12.

The most *efficient* Striper on the market today! Traffic engineers the country over rely on the superior design of the "REFLECTO-LINER" to save time and money, give dependable, long-lasting performance. This machine handles *all* modern marking materials with ease. An air supply of *100% reserve* is constantly maintained during operations, without burdening compressor or motor. Added to this reserve capacity are the important advantages of channel and tubular steel construction, anti-friction wheel bearings, a high-speed motor, high-capacity "Nu-Matic" spray gun . . . advanced engineering throughout! Make the "REFLECTO-LINER" *your* choice.

REFLECTO-LINER

WALD INDUSTRIES, INC.

Main Offices: Huntingdon, Pa. Factory: Montgomery, Pa.

Write, wire or phone for additional information

Zoning Laws Allow Money-Making at Home — Within Bounds

MONEY-MAKING PROJECTS carried on at home are allowed by most zoning laws, provided the home does not become more of an office than a place to live.

That recognition of community customs was noted in a survey of zoning ordinances representative of the United States and Canada, according to the American Society of Planning Officials, which has published the survey's findings in a 24-page report.

Part of a home may be used as the office of a doctor or lawyer, or as a dress-making shop, for example, and the standard of a residential district will not necessarily be lowered. The important thing is that there be a community history of acceptance of certain types of home occupations. Zoning ordinances were found to recognize traditional use, and thus most do not forbid home occupations unless they make a business location out of what is supposed to be primarily a dwelling. Courts have often ruled that beauty shops, real estate offices, and the like are business operations and thus not permitted as home occupations.

Instead of forbidding home occupations, ordinances often set rules to make sure that the occupations do not get out of hand and cause neighborhood deterioration.

Examples of such regulations, designed to eliminate potential nuisance to neighbors and also to prevent the home occupation from expanding into a business, are: those restricting the amount of space in a house that may be devoted to the occupation; those that restrict the type of equipment that may be used, with perhaps a limitation on the amount of horsepower of any motor; and those that limit the number who may be employed in the occupation—some communities allow only members of the family to help.

Is It Smart to Drive In Commuter Traffic?

What's It Costing You To Drive?
Figure it Out for Yourself!
TAKE ONE for your own check on what it costs to drive your car!
PLEASE TAKE ONE

SOLUTION of the over-all urban traffic snarl—traffic, parking, transit—demands communitywide recognition of the total and individual values of a solution locally. The automobilists also must favor it. Chicago Transit Authority, with this 28-inch-by-11-inch car card and pad of forms, suggests an interesting approach to gaining the attention of drivers.

Printings of the card total 3,500 for surface vehicles, and 1,500 for rapid-transit vehicles. The 3¼-inch-by-5-inch form lists, on its two sides, 10 items of car expense. Every owner and driver can figure what it costs to drive a mile and decide whether he should afford to buck business-district traffic morning and night or leave his car home, at a transit parking lot or a fringe parking area.

The formula on these "take one" cards is based on an article in the October 1953 *Reader's Digest*.

WHAT'S IT COSTING YOU TO DRIVE?
Figure It Out For Yourself:
. . . here's how to do it!

(Your Car annual mileage_____)

COSTS	Cost per Year	Cost per Mile
1. Depreciation		
2. Extra depreciation allowance		
3. Insurance		
4. License fee and taxes		
5. Interest on investment		
6. Gasoline		
7. Oil		
8. Tires		
9. Maintenance		
10. Miscellaneous expenses		
11. Total car costs		

Suggestions to help you with your figures:

1. **DEPRECIATION:** Check classified ads for today's value of your car. Subtract the present market value from the price you paid for your car. Divide the difference by the number of years you've owned your car.
2. **EXTRA DEPRECIATION:** If you drive more than 18,000 miles annually, show $9.40 for every thousand miles over 18,000.
3. **INSURANCE COSTS:** Show total annual premiums you pay for all automobile insurance.
4. **LICENSE FEES AND TAXES:** Show state and city license fees, plus personal property tax.
5. **INTEREST ON INVESTMENT:** The money spent for your car would earn about 3% if invested in government bonds.

(over)

6. **GASOLINE:** Divide the cost per gallon of gas by the number of miles your car gets to the gallon to determine cost per mile. Then multiply by miles driven annually to get your total gas cost for the year.
7. **OIL:** Multiply the number of quarts used by the actual cost per quart. Divide by total miles operated annually to determine cost per mile.
8. **TIRES:** For a light car, figure 4/10 of a cent per mile; for a heavy car, 5/10 of a cent. Multiply by total miles operated annually to determine cost per year.
9. **MAINTENANCE:** Includes greasing, repairs, washing, etc. If you don't have actual figures, use 7/10 of a cent per mile for a small car, and 8/10 of a cent per mile for a heavy one. Multiply by miles operated annually to determine total cost for year.
10. **MISCELLANEOUS:** These costs include parking fees, polishing, anti-freeze, tolls, etc. Use estimated figures to the best of your knowledge.

N O W :

ADD up all of the figures in column one and DIVIDE the total cost per year by the number of miles you drive annually to determine what it's costing you to drive per mile.

FIGURE FACTUALLY — show all costs, don't cut corners!

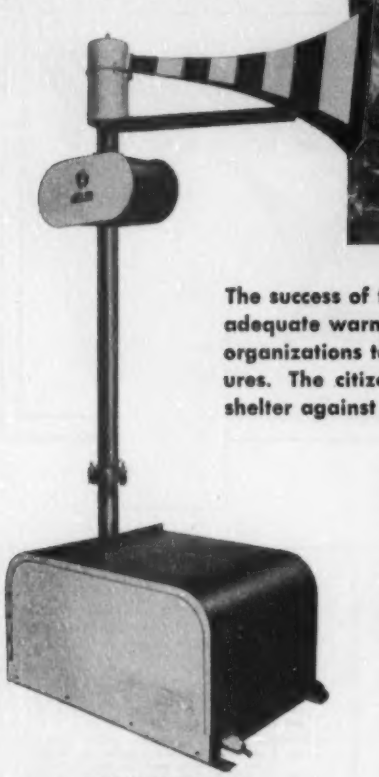
We think you'll agree that CTA IS THE CHEAPER WAY . . . by far!

Ride Local Transit — You'll Avoid Traffic Worries and Save Money!

Operation:

"PEACETIME DEFENSE"

Fortunately, no American city has been put to the test for which CIVILIAN DEFENSE was originally organized. However, natural disasters in the shape of tornadoes, fires, earthquakes and explosions have put the CD organizations to the test and proved its worth in lives saved and panic prevented.



FEDERAL
THUNDERBOLT
directional beam siren

The success of these operations has been due to fast, adequate warning; FEDERAL SIRENS have alerted CD organizations to prompt action and preventive measures. The citizen has been warned in time to take shelter against the impending cataclysm.

Whether or not you fear the super bomb or the ravages of an enemy, no one in any part of the country is free from potential natural disaster. Money spent for an adequate CD warning system is not wasted in a gamble on the possibility of enemy activity; it is an investment for future years in additional permanent safety for your fellow citizens and coming generations. Just as the public water systems, fire alarm systems, street lighting systems and other public services established years ago have been developed for our present and future benefit, just so should an ample warning system be an essential part of community welfare and safety *today*. The vital heart of this system is the mighty FEDERAL THUNDERBOLT siren, result of over 50 years of superior engineering experience. Before you consider any siren, you owe it to your community to investigate Federal's complete line of warning signals. Write now for free information and literature.

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FORMERLY: FEDERAL ELECTRIC COMPANY, INC.

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Zoning and Planning Notes

Edited by NORMAN WILLIAMS, Jr.

Use Restrictions in Non-Residential Districts

NEW YORK. *Von der Heide* v. *Zoning Board of Appeals of Town of Somers*, 123 N. Y. Supplement (2d) 726 (Supreme Court, July 25, 1953).

CALIFORNIA. *People* v. *Sevel*, 261 Pacific (2d) 359 (Appellate Department, September 3, 1953).

ILLINOIS. *Zilien* v. *City of Chicago*, 114 North Eastern (2d) 717 (Supreme Court, September 24, 1953).

In the New York case, a motel was held not to be permitted as an "inn" in a business district (with permissive regulations). The opinion contrasted the more elaborate services provided by an inn with those in a motel, which normally merely furnishes a guest with sleeping quarters, bath and toilet, linen services, and a parking space.

The California case upheld a requirement in a special San Diego County ordinance (not a zoning ordinance) that an open yard for dead storage of motor vehicles must be "entirely inside an enclosed building . . . or . . . entirely enclosed by a solid fence or wall at least six feet in height." Emphasis was placed on fire risks in the opinion.

[*Editorial Comment:* The Illinois decision is another in a long line in which the Chicago zoning ordinance had been declared unconstitutional as mapped. During the large-scale remapping in Chicago in 1942, a strip along South Ashland Avenue, formerly all zoned "commercial," was divided up into alternating segments of "commercial" and the more restrictive "business" districts, which latter did not permit plaintiff's open used car sales lots. When it was argued that the increased restrictions were justified by increased protection of the expanding residential area nearby, the Court answered that residences were also located near the sections left as "commercial." Apparently, the entire strip was largely vacant before 1942, and since was developed largely with uses permitted in "business" districts. The opinion is a strange one, repeatedly indulging in a strong presumption against more restrictive non-residential zoning. It is not clear whether the legal case would have been thought to be better or worse if the whole strip had been rezoned to the more restrictive "business" district, which appeared to be justified by the predominant types of subsequent development.]

Nonconforming Uses

CALIFORNIA. *Livingston Rock & Gravel Co.* v. *Los Angeles County*, 260 Pacific (2d) 711 (District Court of Appeals, September 8, 1953).

MASSACHUSETTS. *City of Everett* v. *Capital Motor Transportation Co.*, 114 North Eastern (2d) 547 (Supreme Court, September 14, 1953).

The Los Angeles County zoning ordinance provides an arrangement whereby nonconforming uses may be given so-called "automatic exceptions" to the zoning regulations, and whereby such exceptions may be terminated under specified conditions. The case involved proceedings for termination of a concrete mixing and loading plant in an area which was rezoned from M-3 (a heavy industrial district where the plant was a permitted use) to M-1, a light manufacturing district. The Court held that, no matter what the procedure was called, revocation of the exception would constitute a deprivation of property without compensation. The argument that this was merely terminating an exception "says in effect that a rose by any other name is not in fact a rose."

[*Editorial Comment:* This case indicates again the constitutional difficulties of terminating a nonconforming use in a district not very different from where it is permitted.]

In the *Everett* case, premises partly in an apartment and partly in a business district were used for a freight terminal, and the loading berths apparently were actually located in the apartment district. Apparently there was no evidence that the building was either completed or used for these purposes before the ordinance took effect; and the Court emphasized that, in order to qualify as a nonconforming use, the building (even if completed) would have to have been actually used for nonconforming purposes. This case helps to clarify the concept of a nonconforming use.

Jurisdiction to Zone Territory After Annexation

CALIFORNIA. *City of South San Francisco* v. *Berry*, 260 Pacific (2d) 1045 (District Court of Appeals, Sept. 17, 1953).

A parcel of land, zoned for single-family dwellings under the County zoning ordinance, was annexed to the City of South San Francisco, and thereafter a building was constructed and three families moved in. Apparently, the City had no zoning ordinance. The Court held that, after the annexation, the premises were no longer within the territorial jurisdiction of the county, and were subject only to whatever regulations might be imposed by the City.

"Spot Zoning" Across Municipal Boundaries

NEW JERSEY. *Cresskill* v. *Dumont*, as yet unreported (Superior Court).

A single four-acre block, located at the edge of the Borough of Dumont and situated at various points opposite land located in the Boroughs of Haworth, Demarest, and Cresskill—all four of which come together at this point—was rezoned from residence to business. The land around was almost all zoned for single-family residence, and shopping centers in the four boroughs were mostly about a mile away, except in Dumont where they were one-half mile or more. The other three boroughs brought an action, acting in their representative capacity on behalf of their citizens, to invalidate this rezoning.

At the end of the opinion, the Court held briefly that the other municipalities had standing to sue, and that the change was not made in accordance with a comprehensive plan. It was also held that the existence of the municipal boundaries did not make any real difference—since the standard requirement, that zoning regulations must take into consideration the character of an area, is to be applied across municipal boundaries. In this context, the Court quoted language from the famous earlier *Cresskill* decision * to the effect that zoning regulations should be considered in their regional context.

[*Editorial Comment:* So far, so good. The holdings set forth above generally involve forward steps in zoning, particularly in the emphasis on the regional context in evaluating zoning regulations.

However, the holdings reported above cover only the last page of a long opinion. The preceding nearly ten pages can only be described as a long tirade—first on the sanctity of property rights, then on general considerations in the law of nuisance and of zoning, which are in effect equated with each other—culminating in a statement that nearby property owners have a "vested right" against zoning changes, which is such an overstatment as to be in effect a misstatement of law.

In the excitement, the opinion appeared to overlook two other planning considerations. First, the implication that business development should never be located across the street from residences is contrary to modern planning principles. Second, there was apparently no consideration of the basic question—whether a new shopping center was needed to serve a growing area in all four boroughs, and if so, whether this was an appropriate place for its location.]

* *Duffcon Concrete Products* v. *Borough of Cresskill*, 1 N. J. 509 (1949) — THE AMERICAN CITY for December 1948, p. 149.

No Local Zoning Regulation Of Offshore Oil Drilling In California

CALIFORNIA. *Monterey Oil Co.* v. *City Court of City of Seal Beach*. 260 Pacific (2d) 846 and 851 (District Court of Appeals, August 27, 1953).

A local ordinance forbade all oil or gas drilling within the territorial limits of the City of Seal Beach, which extended for three miles offshore. These cases involved filling land and drilling for oil, pursuant to a lease from the State Lands Commission, about a mile and a half off shore. The Court held that California statutes gave the State Lands Commission exclusive jurisdiction over all tidal and submerged lands owned by the State, whether or not such lands contained oil, gas, or other minerals, and that these regulations were explicitly made to supersede any other provisions of law. The State was held to have fully occupied the field, and local ordinances could, therefore, not conflict therewith. Moreover, the Court felt that if the ordinance were held to apply, it would be unreasonable and arbitrary.

The second case involved the related question of whether a local building permit could be required for the temporary island constructed with fill to provide a base for drilling for oil. Again, it was held that state law superseded local action.

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Robert T. Eichmann

ROBERT T. EICHMANN
VILLAGE TREASURER

"We have found them very serviceable and the maintenance cost on them is very low"

thank you . .

. . . Mr. Treasurer for those kind words

G. A. HALE
PRESIDENT OF
MAGEE-HALE PARK-O-METER CO.

The two statements quoted above are from a letter written by Robert T. Eichmann, Treasurer of the Village of Rockville Center, Nassau County, N. Y. Rockville's 1100 Park-O-Meters had paid for themselves and Mr. Eichmann's letter accompanied the final payment under the contract. More than 1,000 cities, towns and villages are enjoying this same experience with Park-O-Meters.

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ASK US TO STUDY YOUR SITUATION . . . NO OBLIGATION

Legal Notes and Decisions

Prepared by NATIONAL INSTITUTE OF MUNICIPAL LAW OFFICERS
Charles S. Rhyne, General Counsel

Drunken Driving—Ordinance in Conflict With Statute Void

Where plaintiff was arrested under Atlanta ordinance prohibiting operation of motor vehicle within city while under influence of liquor, held, as there was a public criminal statute covering same state of physical acts, that ordinance was void as violating uniformity clause of State Constitution. *Jenkins, Chief of Police,* v. *Jones,* 75 S. E. (2d) 815 (Ga., April 13, 1953). *Reh. den.* May 13, 1953.

Emergency Vehicle—Red Light Only Denied Status Of Statute

In prosecution of constable of township for failure to obey red traffic light at intersection, held, in affirming conviction, that since constable's vehicle had red light only, and was not equipped with siren, exhaust whistle or bell as required by statute, it was not emergency vehicle. *City of Dayton* v. *Brennan,* 112 N. E. (2d) 837 (Ohio, Mun. Ct., Dayton, Aug. 13, 1952).

City Manager—Power to Remove City Employees

In mandamus to compel city to reinstate plaintiff as lieutenant in fire department, held that city manager had authority to remove all heads of all departments and all subordinate employees. *Piper* v. *City of Wichita,* 258 Pac. (2d) 253 (Kans., June 6, 1953).

City Property—Lease to Veterans' Organization—Statute Authorizing Valid

In action for declaratory judgment as to validity of lease of city property to veterans' organization, held that statute authorizing lease to veterans' organization of buildings or lands no longer necessary for governmental purposes was constitutional. *City of New Orleans* v. *Disabled American Veterans,* 65 So. (2d) 796 (La., April 27, 1953). *Reh. den.* June 1, 1953.

Fingerprinting of Housing Authority Employees Upheld

In action to enjoin fingerprinting by police of employees of municipal housing authority, held that program of mass police fingerprinting was within discretion of authority and had clear relation to welfare of residents of authority's projects. *Young* v. *Chicago Housing Authority,* 112 N. E. (2d) 719 (Ill. App., May 11, 1953). *Reh. den.* June 2, 1953.

Flood Control—City May Compel Removal of Buildings

In action by city and flood control district against landowners adjoining river channel to compel removal of private buildings erected on fill which encroached upon old channel, held, in affirming judgment for plaintiffs, that landowners were bound by surveyed line since change in river bank was caused by artificial filling rather than by river. *Cox* v. *City and County of Dallas Levee Improvement Dist.,* 258 S. W. (2d) 851 (Tex. Civ. App., March 27, 1953). *Reh. den.* May 15, 1953.

Gas, Propane—Injuries from Water Heater Explosion—City Liable

In action against city for injuries from explosion when plaintiff attempted to light hot water heater operated by city gas, held that city was liable since in converting heater for use with new propane gas, it failed to equip heater with 100 per cent shut-off safety pilot and failed to warm plaintiff of dangers from heaters not so equipped. *City of Albany* v. *Burt,* 76 S. E. (2d) 413 (Ga. App., April 22, 1953). *Reh. den.* May 13, 1953.

Insurance, Liability—Purchasing of Not Waiver of City's Tort Immunity

In action by spectator for injuries sustained as result of city's allegedly negligent conduct of school basketball game, held that city was immune from tort liability under circumstances and city had not waived its immunity by purchase of liability insurance. *Hummer* v. *School of Hartford City,* 112 N. E. (2d) 891 (Ind. App., June 8, 1953).

Licenses—Used Car—Ordinance Requiring 65% Freeholders Approval—Valid

On appeal by Park Township from reversal of conviction for operating used-car lot without license in violation of ordinance requiring consent of 65% of freeholders within half-mile radius of lot before issuance of license, held, in reversing and remanding that ordinance did not unconstitutionally delegate legislative power since township retained power to grant or deny license. *People* v. *Gottlieb,* 59 N. W. (2d) 289 (Michigan, June 22, 1953).

Notice of Claim—Typewritten Signature Sufficient

In action against city for injuries sustained when automobile driven by plaintiff was thrown into ditch after striking hole in pavement, held that notice of claim with plaintiff's name typewritten at end was sufficient signature within meaning of statute. *City of Gary* v. *Russell,* 112 N. E. (2d) 872 (Ind. App., June 12, 1953).

Police Protection—Failure to Furnish—City Not Liable

In action against city for death of person who was killed by reason of city's alleged negligence in failing to furnish police protection after person had identified dangerous criminal Willie Sutton, held that, notwithstanding city waiver of immunity under Court of Claims Act, a municipality is not liable for its failure to exercise governmental function of providing fire and police protection. *Schuster* v. *City of New York,* 121 N. Y. S. (2d) 735 (N. Y. Sup. Ct., Kings Cty., March 1953).

Sewer Service Charges Based on Water Used Valid

In action to enjoin city from enforcing ordinance providing for sewer service charge based upon amount of water used by individual, held, in sustaining city's demurrer to petition, that ordinance was constitutional. *Chastain* v. *Oklahoma City,* 258 Pac. (2d) 635 (Okla., May 26, 1953).

Slum Clearance—Right of Displaced Tenants to Enjoin—Denied

In action by tenants, who face temporary relocation in area affected by proposed slum-clearance project, to enjoin operations under Federal Housing Act, held that tenants in the affected area, even though they may be deemed the ultimate beneficiaries, had no legal capacity to sue. *Hunter* v. *City of New York,* 121 N. Y. S. (2d) 841 (N. Y. Sup. Ct., N. Y. City, March 3, 1953).

Smoke Abatement—Evidence from Scientific Device More Reliable than Visual Inspection

In action for violation of city smoke abatement ordinance, held that judgment against defendant would be reversed since evidence showed that he used most scientific means recommended by city for detecting density of smoke and device recorded no illegal smoke density. *City of Chicago* v. *Butler Bros.,* 113 N. E. (2d) 210 (Ill. App., June 18, 1953).

Streets—Opening Proceeding Abandonment—City Not Liable

In action against city for damages caused by abandonment of proceeding to condemn plaintiff's lot for street purposes with which plaintiff's office building and garage had been built to conform, held, in affirming judgment for city, that statement by city officials with respect to completion of building and conformance with proposed street opening did not establish contractual rights between plaintiff and city. *Wacker-Wabash Corp.* v. *City of Chicago,* 112 N. E. (2d) 903 (Ill. App., May 28, 1953). *Reh. den.* June 24, 1953.

Trucks—Limiting Length in Market Area Valid

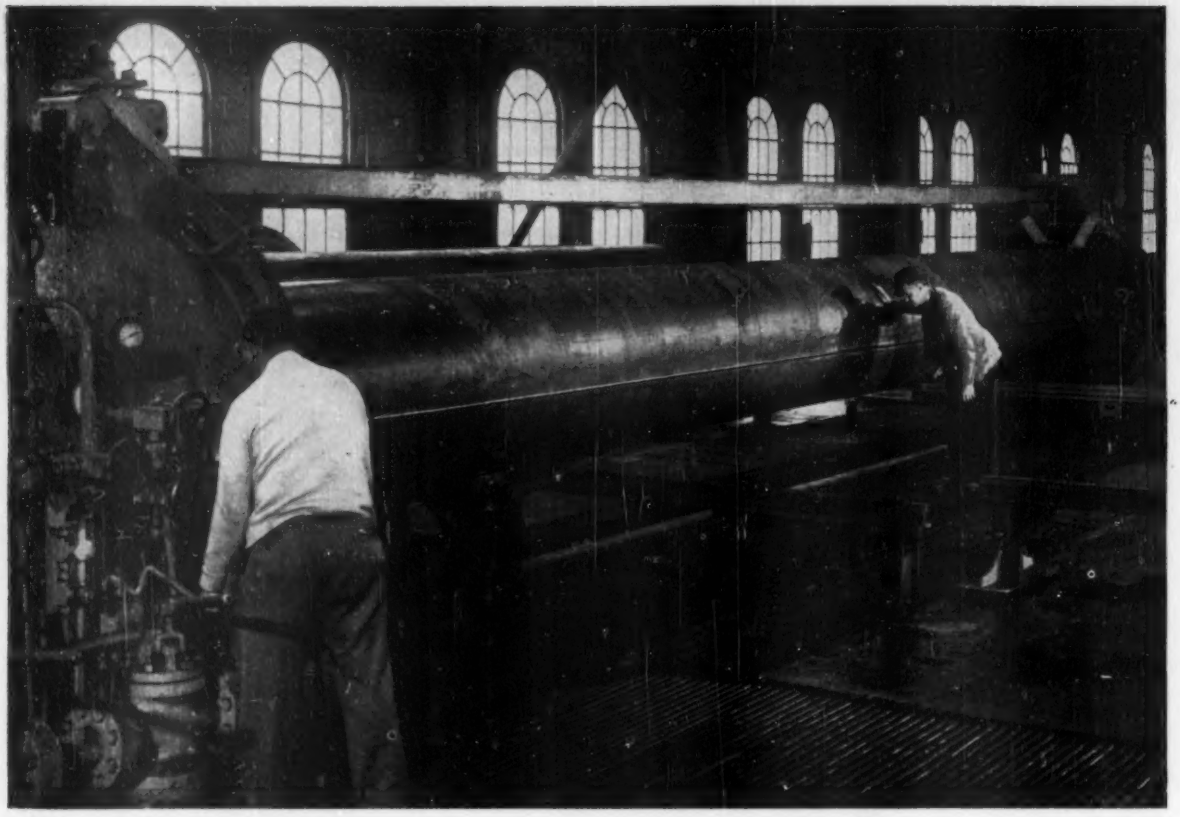
In action to enjoin city of New York from enforcing traffic regulation forbidding vehicles over 33 feet in length from entering market area in city, held that ordinance was not unreasonable nor undue burden on interstate commerce. *Zenith-Godley Co., Inc.,* v. *Wiley,* 121 N. Y. S. (2d) 795 (N. Y. Sup. Ct., N. Y. Cty, May 21, 1953).

Trucks—Tax Based on Weight—Classification Void

In action by company to enjoin city from imposing license tax upon fish hauling based on weight of trucks used, held that since classification was not based upon natural or fundamental distinctions ordinance was invalid. *Security Truck Line* v. *City of Monterey,* 257 Pac. (2d) 775 (Cal. App., May 28, 1953).

Water Service—Higher Rate for Non-Resident Users

In action to enjoin town from charging resident water customer, who resold to others outside town, at higher rate than its resident consumers, held that town owes duty of equal service in furnishing water only to consumers within corporate limits for use therein and higher rates were proper for seller to non-residents. *Fulghum* v. *Town of Selma,* 76 S. E. (2d) 368 (N. C., June 12, 1953).



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The photograph shows a 40-ft length of Bethlehem Steel Pipe undergoing a hydrostatic test at our Steelton, Pa., plant. This test is carried out in accordance with AWWA requirements, the pipe being subjected to a test equivalent to 200 pct of the working pressure.

Each length of Bethlehem Pipe, whether for water- or sewage-line service, is tested in this way to prove its strength and water-tightness. The test also shows conclusively why Bethlehem Tar-Enameled Steel Pipe is a reliable pipe for any type of water line.

In addition to its strength and water-tightness, Bethlehem Tar-Enameled Pipe has these other worthwhile advantages:

It resists corrosion, because the pipe is lined and coated with a smooth, uniform layer of coal-tar enamel. The lining, being impervious to corrosion and incrustation, ensures high flow-coefficients for the life of the installation.

It is also resistant to water-hammer. It can carry a load of nearly four times the working pressure. In addition, it has the resilience to "give" with soil movement, making it immune to the effects of surface vibrations.

Bethlehem Tar-Enameled Pipe can be joined into a tight, sound line by mechanical couplings, or by welding or riveting. The pipe is generally furnished in 40-ft lengths. It comes in diameters from 22 in. i.d. through 150 in. i.d., and in thicknesses to accommodate any working pressure.

Perhaps you would like to have complete information about Bethlehem Tar-Enameled Pipe. If so, all you need do is drop a line to the nearest Bethlehem office.

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Recent City Manager Appointments

The following portraits are of city managers whose appointments have been announced in preceding issues of *The American City*

Gordon Dillon
Claremont, N. H.

John M. Carpenter
Ames, Iowa

Don E. Cunningham
Southern Pines, N. C.

Robert M. Applegate
El Centro, Calif.

M. M. Moore
Grand Rapids, Mich.

ROBERT P. AEX, former manager of Newburgh, N. Y., succeeds Louis B. Cartwright as city manager of Rochester, N. Y.

Lowell, Mass., appointed FRANK E. BARRETT, a former newspaper reporter, to succeed Ulysses J. Lupien as city manager.

The first manager of Owensboro, Ky., is DEAN I. DAULEY, formerly administrative assistant to the city manager of Lubbock, Texas.

CLAUDE E. FISHER, formerly first selectman, was appointed city manager of Hartland, Maine, succeeding Cecil O. Lancaster.

Newport, R. I., appointed WILLIAM A. GILDEA, formerly with the Municipal Survey Associates, as first city manager.

Succeeding W. C. Cavert as city manager of Independence, Kans., is GLEN HACKMASTER, the former city engineer.

J. B. HOWARD, the former city secretary, was appointed acting city manager of Childress, Texas, succeeding James C. Hill.

Stockton, Calif., appointed JOHN C. LILLY, formerly assistant city manager, to succeed R. C. McGee, who is retiring.

The first manager of Dorval, Quebec, is MAURICE R. MARCOTTE, formerly secretary of the Quebec Municipal Commission.

Belton, Texas, appointed the former city engineer, J. G. NASH, city manager to succeed W. F. Hammer.

THEODORE E. RIDLEY, the former manager of Carey, Ohio, was appointed the first manager of Rochelle, Ill.

ROBERT SHARP, one-time manager of Anchorage, Alaska, was appointed first manager of Kodiak, Alaska.

The first manager of Sonoma County, Calif., is NEAL D. SMITH, one-time manager of Santa Cruz, Calif.

Succeeding Murrey W. Fuller as city manager of Madison, S. D., is KARL G. WILLIAMS, the former head of the Street and Water Department.

JAMES STEWART left the managership at Dania, Fla., to succeed J. Floyd Glisson as city manager of Titusville, Fla.

BILL N. TAYLOR, recently retired city manager of Wichita Falls, Texas, has been appointed temporary city manager of Sioux City, Iowa, and will inaugurate the manager plan there.

Wichita Falls, Texas, appointed the former manager of Bryan, Texas., H. A. THOMASON, to succeed Bill N. Taylor (retired) as city manager.

LESLIE WALKER was appointed the first city manager of South Burlington, Vt.

CLARENCE E. RIDLEY
Executive Director
International City Managers' Association

REPRESENTATIVE MUNICIPAL BOND SALES

December 1 to December 11, 1953

Date of Sale			*Purpose*	*Average Maturity (Years)*	*Net Interest Cost Per Cent*
12-1	Chelsea, Mass.	$ 60,000	Municipal Relief	2½	1.595
12-1	Scottsbluff, Nebr.	93,000 75,000	Paving	6¾	1.918
12-1	Maywood, N. J.	64,000	General Refunding	6¾	2.43
12-2	Niagara Falls, N. Y.	1,050,000	Street, Water and Sewer Improvement	5½	1.594
12-2	West Seneca, N. Y.	45,000	Improvement	4½	2.66
12-2	Berryville, Va.	75,000	Water System Extension and Addition	16½	2.75
12-2	Tuscaloosa, Ala.	350,000	Public Improvement	5½	2.227
12-3	Livonia, Mich.	625,000	General Obligation, Sewer	12½	3.498
12-3	Cedar Rapids, Iowa	800,000	Sewer	9	1.702
12-3	Concord, Mass.	256,000	Sewer	9¾	1.95
12-7	Gloucester, Mass.	30,000	Water Department Equipment	3	1.56
12-7	Ravenna, Ohio	125,000	First Mortgage Water Works System Revenue	6¾	2.322
12-8	Sharon, Pa.	400,000	General Obligation	11	2.152
12-8	Glen Cove, N. Y.	488,500	General Improvement	5½	2.74
12-9	Griffith, Ind.	580,000	School Building Corp.	12½	3.91

COMPILED from THE DAILY BOND BUYER

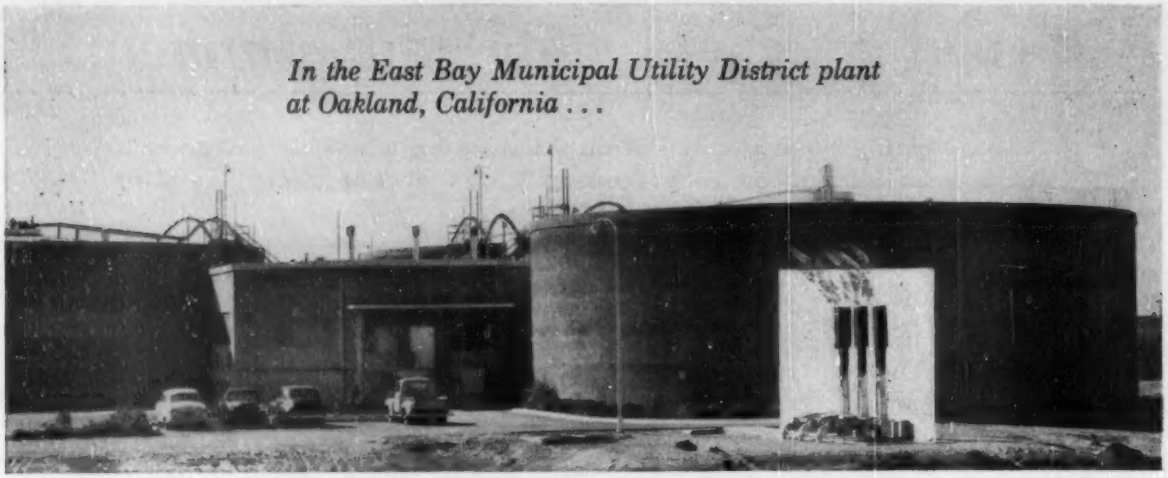
Miami Beach Hotels Aid Convention Fund

A TWO-YEAR PLAN to build flourishing year-round convention business has been put into effect by Miami Beach and 101 of its leading hotels. Contracts have been signed which stipulate that the hotels will contribute 5% of their gross convention room revenue to a fund to be administered by the city.

The city has agreed that the money will be used exclusively to expand its convention bureau's activities. Hotels will contribute to all conventions, whether booked by them or the city.

The voluntary plan is the result of almost two year's negotiations between city and hotel association officials. The contracts were drawn up by the city's legal department and will be in effect until 1955.

In the East Bay Municipal Utility District plant at Oakland, California . . .



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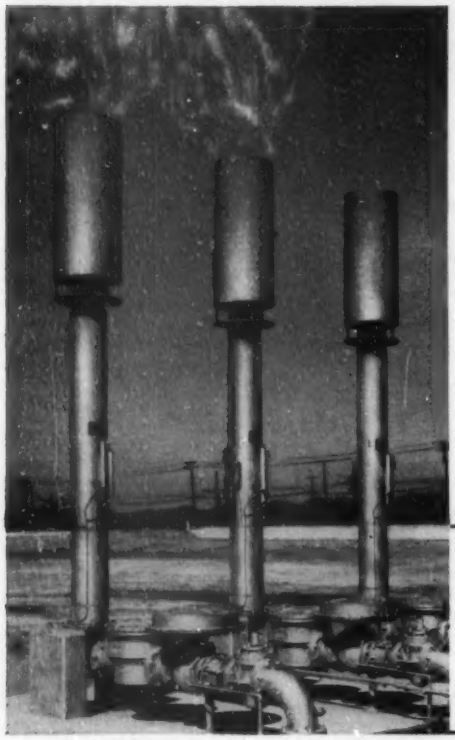

At this plant serving communities in the Bay area, three 95 ft. diameter digesters produce more gas than is needed for digester heating. To avoid resulting odor nuisance, East Bay's engineers have had three P.F.T. 6″ Waste Gas Burners installed for safe, convenient elimination of excess gas.

For control and protection, each burner is equipped with a P.F.T. 4″ Pressure Relief Waste Gas Flame Trap, completely eliminating hazards.

In addition to this gas safety equipment, the following P.F.T. products are installed in the plant: 3 Floating Covers for the 95′ digesters; 3 Heater and Heat Exchanger Units (1,200,000 B.T.U./hr.); 3 Cover Position Indicators; miscellaneous gas control equipment.

Complete information and diagram of P.F.T. Gas Safety Equipment upon request—Bulletin 321.

Design of plant by / Engineers of East Bay Municipal Utility District

The P.F.T. Waste Gas Burner consists of a baffled burner pot mounted on top of an insulated pedestal. Burner pots are provided with adequate baffled air inlets to permit continuous operation of a gas pilot and provide for intermittent combustion of excess gas through a wide range of flows. The insulated pedestal minimizes formation of condensate and prevents freezing.

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Conventions—When and Where

Conventions listed this month for the first time are indicated by an asterisk (*)

Jan. 12-15 Washington, D. C.
HIGHWAY RESEARCH BOARD. Annual Meeting (National Academy of Sciences Bldg.). Dir., Fred Burggraf, 2101 Constitution Ave., Washington 25, D. C.

Jan. 19—New York, N. Y.
AMERICAN WATER WORKS ASSOCIATION—New York Section. Winter Luncheon Meeting (Hotel Commodore). Sec.-Treas., Kimball Blanchard, 50 W. 50th St., New York 20, N. Y.

Jan. 21-22—New York, N. Y.
NEW YORK SEWAGE AND INDUSTRIAL WASTES ASSOCIATION. Annual Meeting (Hotel Belmont Plaza). Exec. Sec., R. C. Sweeney, 21 N. Broadway, White Plains, N. Y.

Feb. 1-3—Louisville, Ky.
ASSOCIATION OF ASPHALT PAVING TECHNOLOGISTS. Annual Meeting (Kentucky Hotel). Sec.-Treas., Ward K. Parr, Box 376, Ann Arbor, Mich.

Feb. 3-5—Los Angeles, Calif.
CALIFORNIA STREET AND HIGHWAY CONFERENCE. Annual Meeting (University of California). Institute of Transportation and Traffic Engineering, University of California (Berkeley and Los Angeles).

Feb. 8-10—New York, N. Y.
ASSOCIATION OF TOWNS. Annual Meeting (Hotel Statler). Exec. Sec., Edw. F. N. Uthe, 91 State St., Albany, N. Y.

Feb. 10-12—Indiana, Ind.
AMERICAN WATER WORKS ASSOCIATION—Indiana Section. Annual Meeting (Lincoln Hotel). George G. Fassnacht, 1330 West Michigan St., Indianapolis, Ind.

Feb. 25-27—San Francisco, Calif.
AMERICAN CONCRETE PIPE ASSOCIATION. Annual Convention (Fairmont Hotel). Managing Dir., Howard F. Peckworth, 228 N. LaSalle St., Chicago, Ill.

March 1-4—Los Angeles, Calif.
ASSOCIATED GENERAL CONTRACTORS OF AMERICA. Annual Meeting. Managing Dir., H. E. Foreman, 1227 Munsey Bldg., Washington, D. C.

March 7-12—College Station, Texas
TEXAS WATER WORKS AND SEWERAGE WORKS ASSOCIATION. Annual Meeting (Texas A & M College). Sec., V. M. Ehlers, 501 W. 33rd St., Austin, Texas.

***March 9-12—New Brunswick, N. J.**
NEW JERSEY MOSQUITO EXTERMINATION ASSOCIATION jointly with the AMERICAN MOSQUITO CONTROL ASSOCIATION. Annual Meeting (Haddon Hall). Sec., Bailey B. Pepper, New Jersey Agricultural Experiment Station, New Brunswick, N. J.

March 10-12—Atlantic City, N. J.
NEW JERSEY SEWAGE AND INDUSTRIAL WASTES ASSOCIATION. Annual Meeting (Hotel Traymore). Sec.-Treas., Michael S. Kachorsky, P. O. Box 766, Manville, N. J.

March 10-12—Washington, D. C.
ASSOCIATION OF HIGHWAY OFFICIALS OF THE NORTH ATLANTIC STATES. Annual Meeting (Hotel Shoreham). Sec.-Treas., A. Lee Grover, 1035 Parkway Ave., Trenton, N. J.

March 11-14—Dayton, Ohio
AMERICAN INSTITUTE OF PLANNERS. Annual Meeting (Biltmore Hotel). Exec. Dir., Perry L. Norton, Room 5-496 A, 77 Massachusetts Ave., Cambridge 39, Mass.

March 14-17—Charleston, S. C.
SOUTHERN ASSOCIATION OF COMMERCIAL ORGANIZATION EXECUTIVES. Annual Meeting (Hotel Francis Marion). Exec. Sec., M. E. Miller, Executive Vice-President, Chamber of Commerce, Daytona Beach, Fla.

March 17-19—Chicago, Ill.
AMERICAN WATER WORKS ASSOCIATION—Illinois Section. Annual Meeting (LaSalle Hotel). Sec., Dewey W. Johnson, Cast Iron Pipe Research Association, 122 S. Michigan Ave., Chicago 3, Ill.

March 18—Boston, Mass.
AMERICAN WATER WORKS ASSOCIATION—New England Section. Annual Meeting (Hotel Statler). Sec., G. G. Bogren, Weston & Sampson, 14 Beacon St., Boston, Mass.

March 18-19—Raleigh, N. C.
SOUTHERN MUNICIPAL AND INDUSTRIAL WASTE CONFERENCE. (North Carolina State College.) For information address Mrs. H. F. Oehler, Jr., Office of Engineering Publicity, North Carolina State College, Raleigh, N. C.

March 19-21—Chicago, Ill.
AMERICAN SOCIETY FOR PUBLIC ADMINISTRATION. Annual Meeting (Conrad Hilton Hotel). Sec.-Treas., Laverne Burchfield, 1313 E. 60th St., Chicago 37, Ill.

(Continued on page 163)

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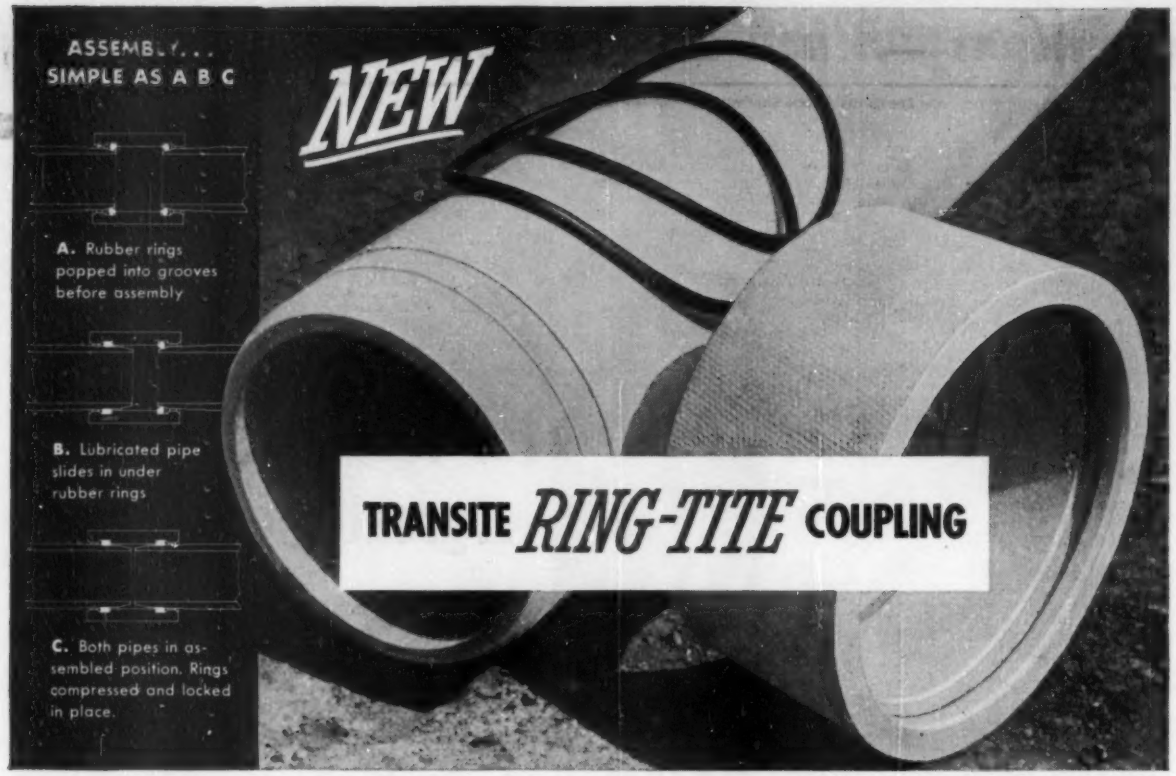
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Pipe ends are automatically separated within the coupling. This provides for expansion and flexibility . . . permits line to conform to curves . . . to withstand shock and vibration . . . to relieve line stresses.

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A TYPICAL PERFORMANCE REPORT— On the Florida installation illustrated in the photograph, a rate of progress as high as 640 feet an hour was achieved—exceeding by far the speed anticipated considering the job conditions.

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Requisites to Effective Community Action

By WILLIAM L. BATT, Jr.

THERE ARE AT LEAST THREE requisites to success in developing community support to meet a common problem.

1. First of all, your problem must be considered important and serious by a large proportion of your fellow-citizens. Finding a solution must be important to their families, their neighborhoods, their town, their state or their nation, preferably in that order. It cannot be a conjured problem, or something that only some outside group or individual thinks your town should be concerned about. It has to be of real concern to your community.

2. Requirement number two is effective leadership. The problem is to find the best natural leader or group of leaders in a town, and to have the leader or leaders mobilize the community forces interested in reaching effective solutions. The natural leader may or may not be one of the community's prominent citizens or titular leaders. But usually there is one man, or a few men, who constitute the powerful leadership of any community.

3. Of course, it isn't enough to arouse the interest of the natural leaders in the community. The other vital requirement—*active participation* by many people—must be met.

Sometimes this can best be done through an existing organization or a combination of existing organizations. Sometimes it can best be done through a new organization set up for the purpose. A small steering committee is, of course, necessary to initiate and give direction to the project, but even this should include people of influence and effectiveness in the community, and not just people who agree with each other.

It would be hard to imagine any areas of conflict more supercharged with emotion than rent control and labor relations. And yet experience in city after city indicates that when partisans of opposite poles of opinion work together on a common problem, minor miracles of mutual understanding and action can result.

The importance of the participation factor can be illustrated every day in the life of the family. Consult the children on a family project, and you are amazed by their cooperation. But decide on a project beforehand, and announce it to them as an accomplished decision, and you can be sure of eliciting a determined opposition.

It is also extremely important to keep communication lines open throughout your community from the inception to the fulfilment of any civic enterprise. Good publicity helps bring your problem to public attention, and can help give a wide sense of participation in developing and applying a solution.

With the three vital factors we have mentioned—general awareness of the problem, direction by the natural community leaders, and widespread participation by citizens—any community project can be carried out with success.

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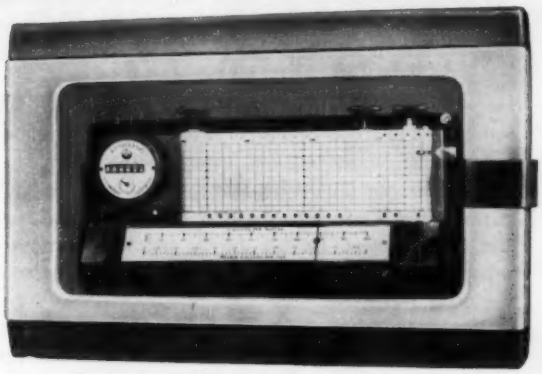

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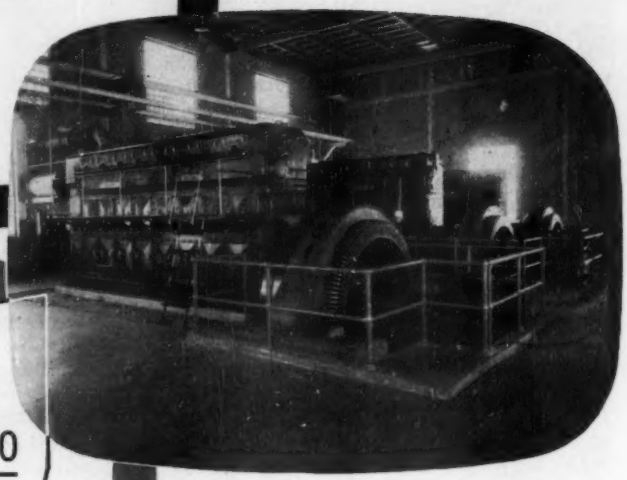

Engine-room view of the new electric plant shows the three Superior Diesels direct-connected to 1000 KW generators.

Continued population growth and industrial power demands on its municipal plant led officials of the City of Bellefontaine, Ohio, to expand generating capacity, using diesels as prime movers.

But the community had another utility—a gas plant—which had to be operated year-'round to maintain a satisfactory income for the municipality. And that's where Superior Dual-Fuel Diesels fitted into the city's plans—diesels which could be operated on gas during the summer, and on oil during the winter months when the gas plant's entire production was needed for other purposes.

The advantages of dual-fuel operation of Superior 4-cycle Diesels were well-known to the administrators of Bellefontaine because there are so many of these engines operating throughout Ohio, and everywhere else in the U.S.A. It's understandable, then, that the first nine months of operation have convinced Chief Utilities Engineer, F. M. Baxley, that Superiors were the logical choice on the basis of performance and fuel economy.

Here, then, is a typical municipality using three Superior Diesels for power generation and getting the same satisfactory results as hundreds of other cities and towns using Superiors. If you haven't checked up lately on the way Superior Diesels fit into municipal utility plants of all types, call your Superior-Atlas Representative or write Springfield for facts and figures.

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(Continued from page 159)

March 22-24—Little Rock, Ark.
ARKANSAS WATER AND SEWAGE CONFERENCE. Annual Meeting (Marion Hotel). Sec., Harrison Hale, Southern State College, Magnolia, Ark.

March 24-26—New York, N. Y.
NATIONAL HEALTH COUNCIL. Annual Meeting. Exec. Dir., Philip E. Ryan, N.H.C., 1790 Broadway 19, N. Y.

March 25-27—Baton Rouge, La.
LOUISIANA MUNICIPAL ASSOCIATION. Annual Convention (Heidelberg Hotel). Sec.-Treas., Mrs. Douglas M. Warriner, 538 Reymond Bldg., Baton Rouge, La.

March 29-31—Greenville, S. C.
AMERICAN WATER WORKS ASSOCIATION—SOUTHEASTERN SECTION. Annual Meeting (Poinsett Hotel). Sec., N. M. deJarnette, Room 418, Wade Hampton Office Bldg., Columbia, S. C.

April 7-9—Emporia, Kans.
AMERICAN WATER WORKS ASSOCIATION—Kansas Section WITH THE KANSAS SEWAGE WORKS ASSOCIATION. Annual Meeting (Broadview Hotel). Sec.-Treas. Kansas Section, Harry W. Badley, 119 W. Cloud, Salina, Kans.; Sec.-Treas. Sewage Works Assn., Dwight Metzler, Room 2, Marvin Hall, Lawrence, Kans.

April 12-14—Toronto, Ontario
AMERICAN WATER WORKS ASSOCIATION—Canadian Section. Annual Meeting (Royal York Hotel). Sec., A. E. Berry, Director of Sanitary Engineering, Parliament Bldgs., Toronto 2, Ontario, Canada.

April 19-22—Lafayette, Ind.
PURDUE ROAD SCHOOL. (Purdue University). Exec. Sec., Ben H. Petty, Professor of Highway Engineering, CE Bldg., Purdue University, Lafayette, Ind.

April 22-23—Lincoln, Nebr.
AMERICAN WATER WORKS ASSOCIATION—Nebraska Section. Annual meeting (Cornhusker Hotel). Sec.-Treas., E. Bruce Meier, 201 Mechanic Arts, University of Nebraska, Lincoln, Nebr.

April 22-23—Watertown, N. Y.
AMERICAN WATER WORKS ASSOCIATION—New York Section. Annual Meeting (Woodruff Hotel). Sec., Kimball Blanchard, Room 1922, 50 W. 50th St., New York 20, N. Y.

April 22-24—Tucson, Ariz.
ARIZONA SEWAGE AND WATER WORKS ASSOCIATION. Annual Meeting (Santa Rita Hotel). Exec. Sec., M. V. Ellis, Supervisor Sewage Treatment Plant, Phoenix, Ariz.

April 23-24—Bozeman, Mont.
AMERICAN WATER WORKS ASSOCIATION—Montana Section. Annual Meeting (Baxter Hotel). Sec., A. W. Clarkson, Assistant Director, Division of Environmental Sanitation, State Board of Health, Helena, Mont.

April 26-29—Washington, D. C.
CHAMBER OF COMMERCE OF THE UNITED STATES. Annual Meeting. Exec. Vice-Pres., Arch. N. Booth, 1615 H St. NW., Washington, D. C.

May 3-5—Chattanooga, Tenn.
AIR POLLUTION CONTROL ASSOCIATION. Annual Meeting (Patten Hotel). For information address Robert T. Griebling, 4400 Fifth Ave., Pittsburgh 13, Pa.

May 6-8—Gatlinburg, Tenn.
TENNESSEE MUNICIPAL LEAGUE. Annual Meeting (Greystone Hotel). Exec. Sec., Herbert Bingham, 228 Capitol Blvd., Nashville 3, Tenn.

May 9-16—Atlantic City, N. J.
NATIONAL CONFERENCE OF SOCIAL WORK. Annual Meeting (Ritz Carlton and Ambassador Hotels). Exec. Sec., Joe Hoffer, 22 W. Gay St., Columbus, Ohio.

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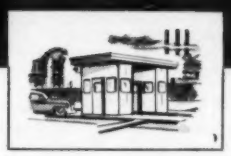

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Municipal & Civic Publications

Needed—New Municipal Revenues

By Simeon E. Leland. Published by The United States Conference of Mayors, 730 Jackson Place, Washington, D. C. 1953. 24 mimeo pp. $1.

A summary of this paper on Municipal Revenues, presented by Professor Leland at the 1953 Annual Conference of Mayors in Montreal, was published in the November 1953 issue of THE AMERICAN CITY (page 159). The paper should be studied in conjunction with the 1953 Report of the U. S. Conference of Mayors, on "Municipal and Intergovernmental Finance in the United States: 1932, 1942, 1952."

Climate and Architecture

By Jeffrey Ellis Aronin. Reinhold Publishing Corporation, 330 W. 42nd St., New York 36, N. Y. 1953. 304 pp. $12.50.

The limitations imposed upon man by the climate have always affected his choice of building design. In this book with its numerous tables and illustrations (including weather charts and graphs) the author presents the problems of sun, temperature, wind, rain, lightning, humidity, etc., and offers practical solutions for living with the elements.

How to pick a site, how to keep a dry basement, how to sleep comfortably on hot nights, how to plant trees for protection and beauty—such information is valuable not only to architects, but to homeowners, gardeners, real estate developers, planners, and city officials, as well.

The Cincinnati Area Must Solve Its Metropolitan Problems

By Doris D. Reed and Thomas H. Reed. The Stephen H. Wilder Foundation, 921 Dixie Terminal Bldg., Cincinnati 2, Ohio. 1953. 44 pp.

Cincinnati's experiences and problems as a metropolitan region correspond with those of other cities. Therefore, this study of these problems, of the various measures which have been applied to mitigate the effects of the suburban rush of population and industry, and of possible future steps, will be helpful to other metropolitan regions as well as to Cincinnati.

Nurseries and Day Care Centers

Information Report No. 55 of the Planning Advisory Service. October 1953. Available to subscribers for the Service, American Society of Planning Officials, 1313 E. 60th St., Chicago 37, Ill. 33 pp.

Nurseries and day care centers, which have developed and grown since the depression of the 1930's, are apparently here to stay. Therefore, Planning Advisory Service has devoted this report to describing some of the causes for the persistence of the nursery institution and to outlining standards developed by professional agencies interested in child welfare, particularly those standards that affect the size and site location of the nursery building. The final section is devoted to zoning regulation of nurseries and day-care centers.

First Progress Report, Committee on Highway Laws

Department of Economics, Finance and Administration, Highway Research Board. Sec., David R. Levin, Chief, Land Studies Section, Financial and Administrative Research Branch, Bureau of Public Roads, U. S. Department of Commerce, Washington 25, D. C. 1953. 47 mimeo. pp.

The First Progress Report on the comprehensive study of the highway laws of the 48 states, now under way, was presented before the American Association of State Highway Officials, meeting in Pittsburgh on November 11, 1953. Modernization of state highway laws to meet today's engineering and financial needs is the Committee's objective.

Attitudes Toward Giving

By F. Emerson Andrews. Russell Sage Foundation, 505 Park Ave., New York 22, N. Y. 1953. 145 pp. $2.

In this new book on giving, the author of *Philanthropic Giving* and *Corporation Giving* studies the motives and attitudes of people making donations. The testimony is based on personal interviews and attempts no statistical measure. The book will be helpful to the fund raiser because it gives people's reactions to various approaches and techniques, as well as their reasons for giving.

Municipal Charter Revision In New Jersey

By Benjamin Baker. Published for the Bureau of Government Research, Rutgers University, by the Rutgers University Press, New Brunswick, N. J. 1953. 27 pp. 50 cents.

The first section of this study provides a brief summary of the Optional Municipal Charter Law of 1950. The second section offers a number of suggestions concerning the organization and functions of charter commissions, which should make the booklet useful to municipal officials and members of charter commissions.

Granite City, A Plan for Aberdeen

By W. Dobson Chapman and Charles F. Riley. Available at The British Book Centre, 122 E. 55th St., New York 22, N. Y. November 1953. 167 pp. $9.

The primary purpose of this publication is to explain the planning proposals for the future development of Aberdeen (Scotland) as put forward by the Corporation of the City, and to enlist the support of the city's citizens in carrying out these improvements.

Although this is a privately executed civic survey and advisory plan, the work can be regarded in many ways as the prototype of planning technique under the 1947 Town and Country Planning Act of Scotland, which came into operation while the survey was being made.

The publication will also serve to show the world at large, through its many interesting photographs, drawings, and maps, the attractiveness and vigor, and other admirable qualities of the Granite City.

Municipal Security Analysis and Bank Investment Problems

Special Bulletin 1953E—Published by the Municipal Finance Officers Association of the United States and Canada, 1313 East 60th St., Chicago 37, Ill. August 1953. 7 pp. 50 cents.

The bank investment problem and the related analytical techniques for judging municipal credit are considered from two angles: (1) to what extent state and local governments rely on commercial banks for credit requirements, and (2) How important the obligations of these governmental units are to the banks. This bulletin is based on a paper by Raymond E. Hengren.

The People's Right to Know

By Harold L. Cross. Columbia University Press, 2960 Broadway, New York 27, N. Y. 1953. 405 pp. $5.50.

Written by a well-known specialist in newspaper law, this book contains a good analysis of state and federal statutes, court decisions, attorney-general opinions, and official regulations that determine rights of public and press access to public records and proceedings.

Important appendices list cases in which newspapers were litigants in this field; set forth statutes defining "public records"; cite judicial decisions on the status of records for a variety of purposes other than inspection, and set forth statutes declaring general rights of inspection.

The book is written with the full understanding of the public's stake in open government. Of particular interest to municipal officials are four chapters on "Inspection of State and Municipal Non-Judicial Records." In this section there are separate chapters on records subject to public inspection, those not subject, "police records," and "newspapers as litigants for compulsory inspection."

Recreation Leadership

By Walter L. Stone and Charles G. Stone. The William-Frederick Press, 313 W. 35 St., New York, N. Y. 1952 $2.

This manual of program planning, philosophy, and development, and of the skills of leadership needed in the use of leisure time is based on 30 years' experience by the senior author and on the philosophy and ideals of his son who here revises an earlier manual written by the father. It is a manual for the leader who deals directly with people, and describes his qualifications and duties, the skills and techniques required, and the training needed.

The Assessment and Taxation of Unfinished Buildings in Canada

Special Bulletin 1953F—Published by the Municipal Finance Officers Association of the United States and Canada, 1313 East 60th St., Chicago 37, Ill. Sept. 1953. 4 pp. 50 cents.

Based on a paper by Douglas H. Clark, this bulletin discusses Canadian laws and practices, and the desirability of assessing unfinished buildings.

Municipal Public Relations

Prepared by Citizens Plan E Association, 274 Main St., Worcester, Mass. June 1953. 46 *mimeo. pp.*

Part I of this booklet gives specific MPR recommendations for Worcester, Mass. These are largely based on the study summarized by Martha Murphy Lindegren in Part II, A Manual On Municipal Public Relations, which points up municipal public relations practices in widespread use and singles out special techniques employed effectively in various cities. Much of the information was gathered by a questionnaire MPR survey conducted in 1951 by THE AMERICAN CITY and the Association of Municipal Public Relations Officers. The questionnaire and a tabulation are included in the manual.

Limited-Term and Excepted Appointments in the Civil Service

By William C. Beyer. Published by the Author, 39th and Walnut Sts., S. E. Corner, Philadelphia 4, Pa. November 1953. 186 *pp.* $3.

The subject of this study deals with an area where the merit system has proved itself weakest in actual operation—the field of provisional appointments, temporary appointments, seasonal appointments, emergency appointments, and excepted appointments. These are the types of civil service appointments which are coveted by the spoils politician. This study covers the legal provisions by which such appointments are made in 59 jurisdictions in the United States. The reports conclusions and recommendations should be useful to public personnel administrators and public-spirited citizens generally, in their efforts to improve the administration of the merit system in this country.

Criteria for Evaluating Retirement Systems for Public Employees

Special Bulletin 1953G *Published by the Municipal Finance Officers Association of the United States and Canada,* 1313 *East 60th St., Chicago* 37, *Ill. September* 1953. 8 *pp.* 75 *cents.*

This discussion of the retirement system movement is based upon information gathered by Arthur C. Meyers, Jr., much of which has been published in a doctoral dissertation. There are suggested 14 criteria by which a municipal retirement system can be judged. The Bulletin concludes that the systems most needing improvements are those providing locally for municipal employees.

Illinois Municipal Revenue, Staff Memoranda of the Legislative Commission on Municipal Revenue

Edited by Jack Isakoff and Gilbert Y. Steiner. The Institute of Government and Public Affairs, University of Illinois, Urbana, Ill. March 1953. 228 *pp.* $1.

The dual purpose of this monograph is (1) to make generally available the data dealing with Illinois municipal revenue and (2) to make available to students of public policy formation a complete picture of the staff reports furnished a state legislative committee. Trends in expenditures; costs and economies; controls and restrictions on municipal finance; municipal revenue sources and losses, and special problems such as referenda requirements are the areas covered in this Illinois publication.

The Town Planning Review

Edited at Department of Civic Design, The Liverpool School of Architecture, University of Liverpool, October 1953. 93 *pp.* $1 *from University of Liverpool Press.*

The October issue contains articles on "The Dutch Contribution," by Steen Eiler Rasmussen, "Baron Haussman and the Planning of Paris," by Brian Chapman, "The Marseilles Experiment," by Donald Tomkinson, and "Speke as a New Town," by George Mercer. In addition, there are the usual Editorial Notes and Book Reviews.

Midwest Inspection Journal

1953 *Directory Issue. Published by Midwest Conference of Building Officials and Inspectors,* 207 *Holliday Bldg. Indianapolis, Ind.* 1953. 68 *pp.* $10.

Covering the states of Ohio, Michigan, Indiana, Kentucky, Illinois, Wisconsin, Minnesota, Iowa, Missouri, Kansas, Nebraska, and the Dakotas, this directory lists officials who administer codes and regulations governing building construction, and indicates the types of codes in force in each municipality.

Shopping Centers

Architectural Record's Building Types Study Number 203. *October* 1953 *issue of* Architectural Record, 119 *W. 40th St., New York* 18, *N. Y. pp.* 178-200.

This study reviews the planning elements involved in shopping-center design and construction. Illustrations are given of numerous small and large centers throughout the country, with particular attention to such aspects as traffic access and off-street parking.

Geographical Features of the Automation of Industry

By David G. Osborn. Department of Geography, University of Chicago, Chicago 37, *Ill. August* 1953. 119 *pp.* $3.

Automation—defined as automatic operation, processing, and handling of materials and information—is studied from a geographic viewpoint. That is, the study emphasizes industrial location and industrial land-area requirements as they are affected by changes in process.

Recreation

FLORIDA — Swimming Pools and Bathing Beaches. Proceedings of the Sixth Florida Public Health Engineering Conference, March 24 and 25, 1953. Bulletin Series No. 62. Published monthly by the Florida Engineering and Industrial Experiment Station, College of Engineering, University of Florida, Gainesville, Fla. September 1953. Graphs. Tables. 55 pp.

HOLTON, KANS.—Recreational Development of Prairie Lake. This report has been prepared for the City Commission by the Governmental Research Center, University of Kansas, Lawrence, Kans., Ethan P. Allen, Director. Prepared by Lyle C. Kyle, Assistant Director-Consultation, and Marvin Meade, Senior Analyst. Special Report No. 42. Illus. 43 pp.

MARYLAND—Park Development Program, June 1, October 1, 1953. National Capital Park and Planning Commission. Map. 20 pp.

Finance and Taxation

CANADA—Principal Taxes and Rates. Federal, Provincial and Selected Municipal Governments, 1953. Special Compilation. This is not a report or publication, but a statement compiled to meet a limited and special demand. Prepared in the Public Finance and Transportation Division, Dominion Bureau of Statistics, Ottawa. 11 pp. 25 cents.

KENOSHA, WIS.—Budget. A financial plan for the year 1954. Office of the City Manager. Submitted to City Council, November 9, 1953. Unpaged.

PHILADELPHIA, PA. — Report on the Philadelphia Firemen's Pension Fund. Published by Bureau of Municipal Research, 311 S. Juniper St., Philadelphia 7. August 1953. Tables. 28 pp.

VIRGINIA — Salaries and Working Conditions of Firemen in Various Virginia Fire Departments. Report No. 358. League of Virginia Municipalities, 905 Travelers Bldg., Richmond 19, Va. October 1953. 12 pp.

GENERAL—Tax Policy. Wise Tax Policy Necessitates Reliable Tax Information. Available from Tax Institute, Inc., 457 Nassau St., Princeton, N. J. Tables. 8 pp. Single copies, 25 cents. Special prices on quantity orders.

——Compendium of City Government Finances in 1952. Prepared under the supervision of Allen D. Manvel, Chief Governments Division, Bureau of the Census. For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. 157 pp. 65 cents (paper).

Street Construction and Maintenance

BRITAIN — Road Research, 1952. Department of Scientific and Industrial Research. Available from British Information Services, Sales Section, 30 Rockefeller Plaza, New York 20, N. Y. Illus. Graphs. Tables. 88 pp. $1.15.

LONDON, ENGLAND — Road Research: Salt Treatment of Snow and Ice on Roads. Department of Scientific and Industrial Research, Road Research Laboratory. Road Note No. 18. Charles House, 5-11 Regent St., London, England. 8 pp. Sixpence net.

GENERAL — Essentials of Soil-Cement Construction. A review for practicing engineers and a short text for school and classes on soil-cement. Published by Portland Cement Association, 33 W. Grand Ave., Chicago 10, Ill. June 1953. Illus. 21 pp.

Education

NEW YORK, N. Y.—Up-Hill Journey. A report on the activities of the Public Education Association on behalf of New York City's schools and colleges, 1951-1953. Preparation and text by Joseph P. Lyford, Director of Staff, Public Education Association, 20 W. 40th St., New York. 61 pp.

Air Pollution

GENERAL—Review of Latest Developments in Outdoor Air Pollution by W. C. L. Hemeon, Engineering Director, Industrial Hygiene Foundation, 4400 Fifth Ave., Pittsburgh 13, Pa. Illus. Graphs. 14 pp.

Florence Issue, Urbanistica No. 12

Published by Italian Institute of Planning, Torino, Italy. 1953. 104 pp., *plus English translation. Available from Editorial Department,* THE AMERICAN CITY, *470 Fourth Ave., New York* 16, *N .Y.* $4 *per copy.*

With this comprehensive, beautifully illustrated monograph, *Urbanistica* starts a series which will alternate with the usual issue of the magazine. Each of these special issues will be devoted to particular cities—the next ones on Rome, Milan, and Venice. They aim at describing the physical structure of these cities and their redevelopment plans, and also merging their development pattern into a single historical economic and sociological outlook. Emphasis is given to the role of social institutions in the various physical plans and programs that have developed through the years since the Roman period. Reports are included on the reconstruction progress in Florence since World War II, and on the need for regional planning.

Other Reports Received

Water Supply and Treatment

DETROIT, MICH.—Annual Report by the Au- Water Reclamation in Relation to Groundwater Pollution. SWPCB Publication No. 6. State Water Pollution Control Board, Sacramento, Calif. Illus. Graphs. 124 pp.

PORTSMOUTH, VA. — Annual Report 1952-1953 Portsmouth Water Department. Illus. Tables. Unpaged.

Annual Reports

DETROIT, MICH.—Annual Report by the Auditor General for the Fiscal Year Ended June 30, 1953. Benjamin J. Tobin, Auditor General. Tables. 123 pp.

EASTON, PA. — Sixty-Sixth Annual Report. 200th Anniversary 1752-1952. Compiled by C. E. Rogers, City Clerk. Tables. 92 pp.

ESSEX COUNTY, MASS. — Annual Report of the County Engineer, for the Year Ending December 31, 1952. 23 pp.

SACRAMENTO, CALIF. — We — The People of Sacramento, Calif. Published by the City Government. Pictorial Account of 1952-53 Fiscal Year Operation of City. October 1953. 40 pp. Single copies free from City Clerk, City Hall.

SAGINAW, MICH. — A Progress Report on Your Local Government. Published by *The Saginaw News,* October 23, 1953. Newspaper form. Illus. 12 pp.

WESTMOUNT, QUEBEC—1952 Annual Report. An account of Department activities, cost and operation of Municipal Services during the year. Illus. Tables. 39 pp.

CHICAGO, ILL. — Annual Report of the Department of Public Works, City of Chicago, for Year Ending December 31, 1952. 322 pp.

Planning, Housing, and Zoning

BINGHAMTON, N. Y. — The Use of Land. Prepared by Broome County Planning Board, 209 County Court House, Binghamton, N. Y. Maps. Tables. 22 pp.

BOSTON, MASS. — The New York Streets Project Report (Preliminary). Prepared by the Urban Redevelopment Division of the Boston Housing Authority. June 1952. Maps. Tables. 65 pp.

Government and Administration

MERCER COUNTY, N. J. — This is Mercer County. A survey of the county government. Prepared and published by The League of Women Voters, with a map of Mercer County. 1953. 55 pp. 50 cents.

OAK PARK, ILL. — Oak Park—the World's Largest Village. Published as a community service by the League of Women Voters of Oak Park and River Forest. First Edition, 1951. Illus. Tables. 50 pp. 50 cents.

VIRGINIA — Information Regarding Personnel Administration in Virginia Cities. Report No. 359. November 1953. League of Virginia Municipalities, 905 Travelers Bldg., Richmond 19, Va. 15 pp.

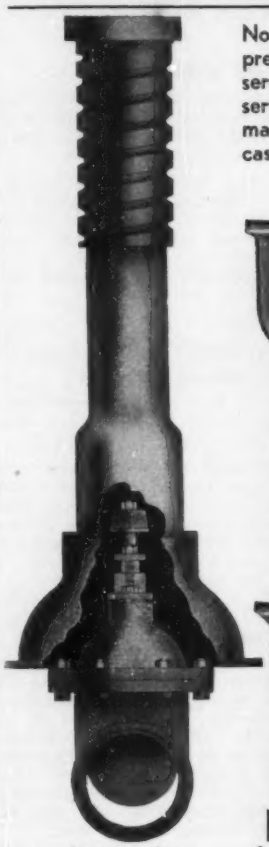
Laws and Legal Decisions

AUSTIN, TEXAS—Charter of the City. Compiled by the City Attorney. Published by Authority of the City Council 1953. 47 pp.

HARRIS COUNTY, TEXAS — Laws Passed by the 53rd Texas Legislature, Affecting Local Governments in Harris County. Prepared by the Tax Research Association of Houston and Harris County, Inc. November 1953. 8 pp.

VIRGINIA — Representative Ordinances Regarding the Cutting of Weeds and Keeping Vacant Lots in a Sanitary Condition. Report No. 360. League of Virginia Municipalities, 905 Travelers Bldg., Richmond 19, Va. November 1953. 12 pp.

"BUFFALO" Municipal Castings come in every size and style!



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If you need special castings, either gray iron or non-ferrous, let us give you a quotation without obligation!

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Sewerage and Sewage Treatment

CALIFORNIA—Report on a Systematic Study of the Algae of Sewage Oxidation Ponds. State Water Pollution Control Board, Sacramento, Calif., Room 610, 721 Capital Ave., SWPCB Publication No. 7. 1953. Illus. Graphs. Maps. 35 pp.

ROCHESTER, MICH. — Sewage Treatment Plant for Fiscal Year July 1, 1952, Through June 30, 1953. Available from Sewage Treatment Plant, 800 E. Third St., Rochester, Mich. Maps. Graphs. Mimeo. Unpaged.

GENERAL—Sewage Service Charges in Cities Over 5,000 Population. Special Report No. 18 by American Public Works Association, 1313 E. 60th St., Chicago 37, Ill. Tables. Graphs. 35 pp. $2.

Traffic

DETROIT, MICH.—Second Annual Report of the Streets Traffic Commission for the Fiscal Year Ended June 30, 1953. 112 East Jefferson, Detroit 26, Mich. 28 pp.

NEW YORK, N. Y.—East Side Airlines Terminal and Parking Garage. Triborough Bridge and Tunnel Authority.

Refuse Collection and Disposal

GENERAL — Refuse Collection and Disposal for the Small Community. A joint study and report of U. S. Department of Health, Education, and Welfare, Public Health Service, Washington, D. C., and American Public Works Association, 1313 E. 60th St., Chicago, Ill. November 1953. Illus. Graphs. 39 pp.

Radio Engineers Convened in Boston

THE FOURTH ANNUAL MEETING of the National Professional Group on Vehicular Communications was held November 12-13, 1953, in Boston, Mass. Members are manufacturers and users of two-way radio.

With over 600,000 transmitter receivers installed in automobiles and trucks, including municipal vehicles, most papers at the current meeting were devoted to tentative solutions to "channel-crowding."

In a highlight of the meeting, Police Commissioner Donald D. Leonard of Detroit said that an all-time peak crime-wave could occur only if law-enforcement agencies were without two-way radio communication. He named two-way radio as "the greatest single weapon" of the police.

Norfolk Buys Mobile X-Ray Unit

IN AN EFFORT to detect as many early cases of tuberculosis as possible, the City of Norfolk has purchased a $17,000 mobile X-ray unit and has started out on a mission of chest-checking citizens all over the city for tuberculosis. Since cases of tuberculosis detected in the early stages can be treated more successfully, it is believed that the X-ray unit will be an important factor in controlling the high fatality rate of this dread disease in the Tidewater area.

Great Expectations

The mobile unit, which takes an average of 2 pictures per minute, will make it possible for chest X-rays to be made regularly in schools, industrial plants, businesses, and other organizations. Approximately 13,000 X-rays a year are presently made with the facilities at the Department of Public Health. With the services of the mobile unit, it is expected that this number will be increased to 70,000 a year, which is more than one-third of the city's population over 12 years of age.

All groups, businesses, and organizations have been urged by the Director of Public Health to take advantage of the service of the mobile unit and to file their requests with the Department of Public Health. The X-rays are free.

H. H. GEORGE, III
City Manager
Norfolk, Va.

LEADITE

The Pioneer Self-Caulking Material for C. I. Pipe

TABLE OF COMPARATIVE QUANTITIES

Nominal inside dia. of pipe, in.	Depth of joint, inches of Leadite	Approx. lbs. of Leadite per joint	Depth of joint, inches of lead	Approx. lbs. of lead per joint
4	2.5	2.00	2.25	8.56
6	2.5	3.00	2.25	11.71
8	2.5	4.00	2.25	14.63
10	2.5	5.00	2.25	17.70
12	2.5	6.00	2.25	20.86
14	2.5	7.00	2.25	24.02
16	2.5	8.25	2.25	33.07
18	2.5	9.25	2.25	36.88
20	2.5	10.50	2.25	40.71
24	2.5	13.00	2.50	53.02
30	2.75	16.00	2.50	65.36
36	2.75	19.00	2.50	77.96
48	3.50	30.00	3.00	121.15
54	4.0	38.00	3.00	135.60
60	4.0	42.00	3.00	150.70

THE LEADITE COMPANY
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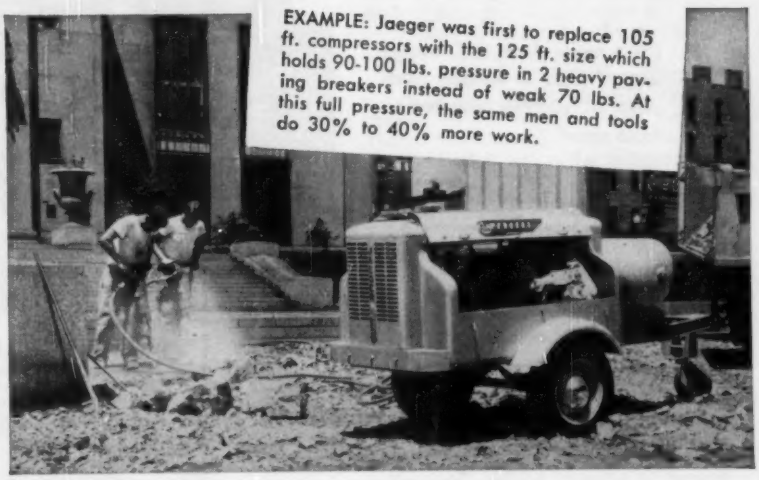
No Caulking

Jaeger "air plus" puts full wallop into any set of tools



EXAMPLE: Jaeger was first to replace 105 ft. compressors with the 125 ft. size which holds 90-100 lbs. pressure in 2 heavy paving breakers instead of weak 70 lbs. At this full pressure, the same men and tools do 30% to 40% more work.

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Comparable increases in production are obtained with all 6 Jaeger "new standard" ratings. Their performance has been proved-in-use by thousands of units in the field. First cost and operating cost, per cu. ft. of 100 lb. air, is far below any "old standard" size machine.

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- **Easily adapted to narrow band operation.**
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- **It is available from 2½ to 60 watt output.**
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- **It can be transferred from one vehicle to another.**

The Bendix* Multi-Master incorporates all the new and outstanding features of Bendix 2-way radio. It has range and power. Static free reception. Longer life components. Low power drain.

Bendix offers a complete line of accessories from hand sets to speakers, antenna to shock mounts . . . plus all technical help in obtaining license and complete system engineering.

It costs no more to own the best . . . so look at Bendix Radio before you buy. For complete details and specifications, write today to the address below.

It's a new, clean and rugged design. Light in weight, compact. All controls mounted on front panel.

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Purchasing News

Information for officials interested in equipment and services for the construction, operation and maintenance of municipal utilities

New Street Cleaner Handles Leaf Disposal

Lewis H. Thomas, President of the Omaha Body and Equipment Co., explains the operation of the Obeco Tornado flexible suction hose to Brian Seymour, Street Superintendent, Omaha, Nebr.

Burning leaves at the curb is not only a fire hazard, it damages the pavement as well. Fortunately, the introduction of a new machine has rendered this method of leaf disposal obsolete, and with it, the pre-burning job of sweeping leaves away from the curb.

The Obeco Tornado disposes of leaves as it cleans your streets. It does this with a flexible suction hose, complete with an aluminum nozzle that cleans in the most inaccessible spots — even under parked cars. This 6-in. diameter hose lets objects pass through easily. When not in use it may be stored on a carrying rack, located at the side of the truck.

It takes two men to operate the Tornado. The major work is done by a heavy-duty 4-cylinder engine that provides a powerful suction. All rubbish passes directly into the air-tight truck body from the pick-up nozzle. The body itself is equipped with special filters to prevent the carry-over of leaves, paper scraps, and other light debris that usually clutter the streets.

The loaded Tornado is driven directly to the lump site for unloading. Here a powerful, 7-ton hydraulic hoist dumps capacity loads quickly. The truck body is so constructed that loads never stick, bind, or jam.

For full data on the Obeco Tornado street cleaner, write directly to the Omaha Body & Equipment Co., 24th & Vinton Sts., Omaha, Nebr., or you may use the Post Card on the colored page in this section. Circle No. 12.

Clears Snow from Sidewalks, Parking Lots

Use this unit on pick-up or other small trucks to remove snow from parking areas, airports, sidewalks, and alleys. The blade of the RT-10 snow plow can be angled to the right, left, or used straight on. The moldboard is raised and lowered hydraulically.

The Root Spring Scraper Co., has designed the RT-10 so that the removal of one pin results in the discharge of the snow to the right or left. The moldboard has been equipped with a large tension spring enabling it "to trip" should it strike a foreign object hidden beneath the surface of the snow.

These easily installed snow plows are described in detail in *Catalog No.* 54, available on request from Root Spring Scraper Co., 527 W. North St., Kalamazoo, Mich. Write directly, or use the Post Card on the colored page in this section. Circle No. 14.

Ohmer Toll-Collection Equipment

Annual highway construction is proceeding at the rate of over three billion dollars worth a year and toll roads and bridges are an ever larger factor in the financing and operation of major highways. A recent example was the Denver-Boulder Turnpike, described in THE AMERICAN CITY for October 1953, on which Ohmer registers account for the tolls. The equipment consists of 8 registers with traffic counters, 4 curb indicators, and 8 road treadles.

The Ohmer toll collection equipment and typical toll register installations are described in a 28-page illustrated booklet, issued by Rockwell Mfg. Co., 400 N. Lexington Ave., Pittsburgh 8, Pa. The five pieces of equipment making up this system are the Model 91T toll recorder, customer indicator, inspector's indicator, neon indicator and road treadle.

The booklet names the fundamentals of a toll revenue control system. These include vehicle axle counting and tamperproof recording of all classes of tolls, both of which are made immediately visible to vehicle drivers. This type of equipment is suitable also for collecting fees at municipal parking lots. It is particularly applicable to the large fringe and perimeter parking facilities which cities are considering providing outside the business district and served by public transit.

For a copy of the new, illustrated booklet, write directly to the manufacturer, or you may use the Post Card on the colored page in this section. Circle No. 7.

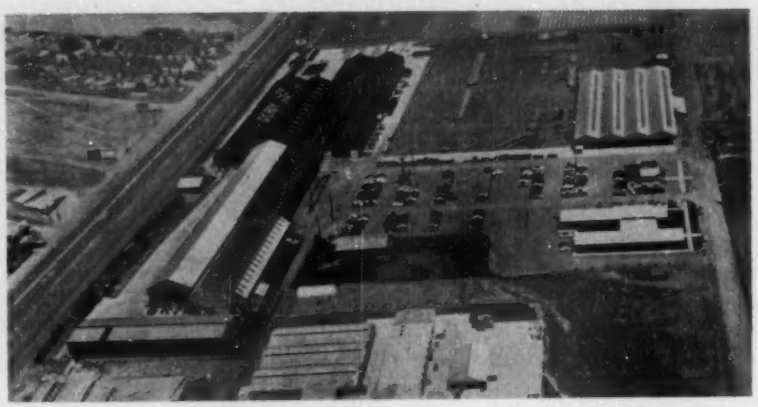
New Constant-Current Street-Lighting Transformer

Two new bulletins describe the Type RO2 constant-current street-lighting transformer made by General Electric Co., Schenectady 5, N. Y.

GEC-1211 contains 4-pages of information on the series-circuit transformers and control for street lighting. It provides complete technical and electrical data on mounting, ratings, calculation of proper kw rating, performance information, construction and operational features, and application.

The second bulletin, *GEA*-5975*A*, provides 8-pages of pertinent information on the principal features of the new transformer and explains how technological developments have been incorporated into the design.

Copies of the new bulletins are available directly from the manufacturer, or you may use the Post Card on the colored page in this section. Circle No. 48.



The Be-Ge plant is located on a 27-acre tract of land at Gilroy, Calif.

Oliver Acquires Be-Ge Manufacturing Company

The Oliver Corp., Dept. 36, 400 W. Madison St., Chicago 6, Ill., recently acquired the outstanding capital stock of Be-Ge Mfg. Co., Gilroy, Calif., makers of construction machinery and farm equipment. Be-Ge, it was further announced, will operate as an Oliver subsidiary under the direction of the present management headed by Albert Gurries, president, and David V. Stout.

Be-Ge will be operated as a separate division, retaining its manufacturing and dealer organizations. The new subsidiary manufactures scrapers ranging in capacity from 1½ to 18 yards, hydraulic control units and cylinders, land-levelers, trenchers, and an agricultural equipment line.

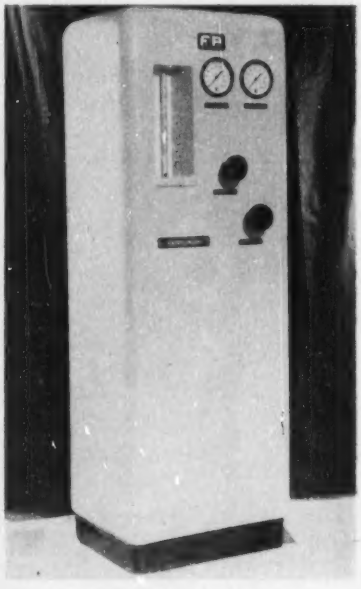
Corrosion Resistant Chlorinator

A new type of chlorinator drew the attention of sewage works men at the FSIWA meeting in Miami, Fla. Simple enough for any operator to disassemble and reassemble, accurate enough to allow the operator to quit worrying about chlorine feeding, reliable enough to give complete safety, is the way that those sewage men inspecting the unit expressed themselves.

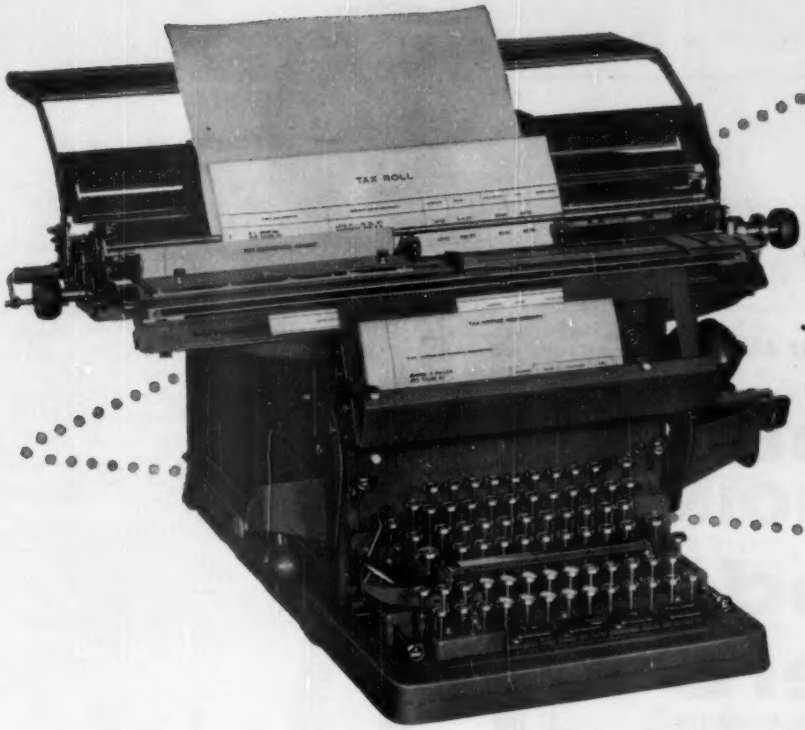
The chlorinator, made by the Fischer & Porter Co., Hatboro, Pa., is remarkably simple. The vacuum regulator, the vacuum breaker, and the differential pressure regulator, all have many identical parts, thus simplifying the parts-inventory problem. The chlorine meter has flow ranges as high as 20:1 without sacrificing accuracy. The meter is of the direct-reading type and is remarkably accurate. The rate valve is constructed of corrosion-resistant material and has fine pitch threads to allow minute changes of flow.

The cabinet of the dispenser is made of polymer-impregnated fibre glass, similar to that now in use in automobile bodies, boat hulls and like products. Program chlorination is easily adapted to the chlorinator by the use of a timer mechanism.

A new gate valve with a desirable self-cleaning feature also attracted considerable attention at this same meeting. This also is a Fischer & Porter product useful in sewage works.



Complete details on the chlorinator are available from the company. Write directly, or use the Post Card on the colored page in this section. Circle No. 25.



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It's the BURROUGHS TAX ACCOUNTING MACHINE

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This Burroughs is the only typewriter-accounting machine with direct multiplication. In *one operation* it—(1) multiplies, (2) computes and totals tax installments, (3) writes records, tax receipts, bills, (4) accumulates column totals.

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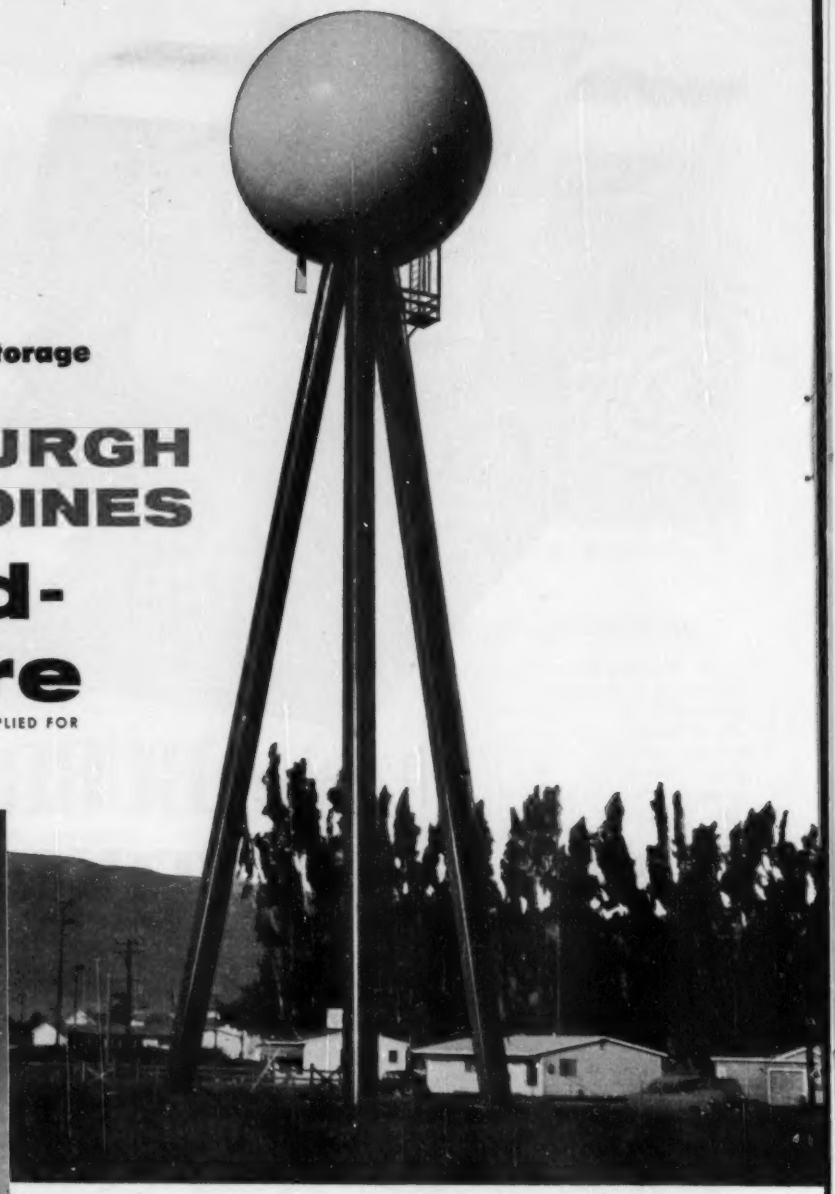
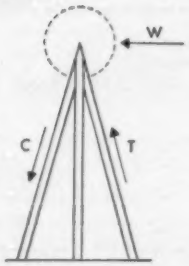


The TRIPOD-SPHERE illustrated, located at Gonzales, California, has 100,000-gallon capacity, with 31 ft sphere, on a 100 ft tower. Head range is 23 ft 1 in. Diagram shows how wind force (W) on sphere places columns in tension or compression, without bending.



This remarkable Pittsburgh-Des Moines development in elevated water storage combines striking appearance with new construction simplicity and economy. • Consisting of an Icosasphere supported by a tubular tripod, the TRIPOD-SPHERE requires no wind bracing members. Because the center of wind pressure on the sphere coincides with the point of intersection of the supporting columns, no bending is introduced. Construction of the TRIPOD-SPHERE is covered by a patent application. • Write for details on this new design in terms of your prospective water storage needs.

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DES MOINES (8), 913 Tuttle Street
DALLAS (1), 1217 Praetorian Bldg.
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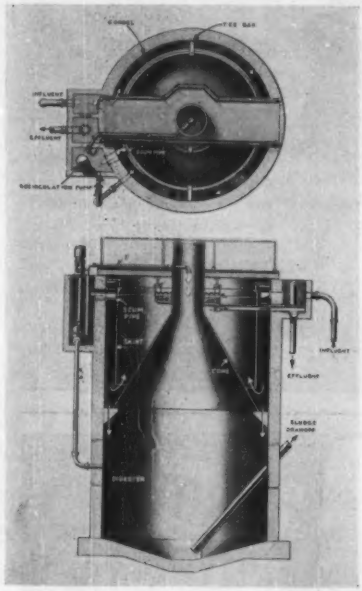
A Practical Sewage Plant for the Small Community

"The most practical small-size sewage treatment unit since the Imhoff tank," is the way many sewage-works men are describing the Spiragester. This unit combines a Spiroflo Clarifier, with digestion tank beneath it. Thus, a small city can get a self-contained sewage-treatment plant at a price that won't require them to commit financial suicide to supply it.

The Spriagester is cylindrical in shape. A vertical steel skirt is mounted



inside of the cylinder, paralleling the wall, and extending down a considerable distance into the liquid. A steel cone is mounted inside of the skirt with the top of the cone extending above the top of the Spiragester, and the cone resting on wall corbels below the skirt bottom. The bottom of the cone is nearer the wall than the skirt, thus, a gas seal is formed between the skirt and the cone.

Sewage enters the upper portion of the raceway between the skirt and the wall, in a tangential manner, which causes the sewage to flow around the race and at the same time, travel downward to the bottom of the skirt. At this point, the effluent flows upward inside of the skirt to the centrally located collection trough, while the settleable solids drop into the lower digestion compartment through the opening between the bottom of the cone and the Spiragester wall.

A unique feature of the Spiragester is the recirculation of active digester liquor into the top of the cone, which breaks up the scum at the high point of highest concentration.

The unit has the added advantage of being readily changed into a digester if the city outgrows it. The concrete corbels which support the steel cone can, if desired, be used to support a floating cover of a digester.

At the recent Federation of Sewage Works Associations meeting in Miami, the Trebler Sampler, made by the same company as the Spiragester, also attracted much attention. This consists of rotating, chain-driven scoops mounted on an aluminum frame so that they dip into the channel at timed intervals. The sampler has a variety of scoops which can be used, depending on the type of waste to be sampled.

The Spiragester and Trebler Sampler are products of the Lakeside Engineering Corp., 222 W. Adams St., Chicago 6, Ill. For additional information, write the company direct, or use the Post Card on the colored page in this section. Circle No. 10.

Points Favoring a Central Storehouse

When the purchasing department of a city has become sufficiently busy and recognized to feel the need for a storehouse or centralized storehouses, Albert Pleydell Associates, Inc., lists the principal advantages to consider.

Inventories are under better control when supplies are bought through a central stores account. Deciding what to carry in stock encourages standardization. Fewer requisitions and purchase orders are written, with reduced clerical work. Larger quantities can be purchased periodically at better prices and closer management.

Write for a copy of Technique 6 and of the booklet on office planning, to Albert Pleydell Associates, Inc., 15 Park Row, New York 38, N. Y., or Lincoln-Liberty Bldg., Philadelphia 7, Pa., or you may use the Post Card on the colored page in this section. Circle No. 42.

New York Pedestrians Become Disc Jockies

Some 300,000 new traffic markers like these at Times Square are expected to be guiding hurried New Yorkers safely across congested intersections throughout the city. The plastic disks have molded-in color and won't chip, rust, or tarnish. They are applied to the street surface by means of a special adhesive and a metal pin. Permanent installation of the plastic disks follows a successful trial installation made in the city more than two years ago.

The Tenite markers used at Times Square and other intersections, were purchased by the city from Traffic Safety Supply Co., 2636 N. E. Sandy Blvd., Portland 12, Ore., under the

Times Square close-up of a pedestrian crosswalk that is linked with bright new Dur-O-Line traffic markers molded of Tenite butyrate plastic.

trade name, Dur-O-Line. For a detailed description of these markers, write the company direct, or you may use the Post Card on the colored page in this section. Circle No. 4.

Loader Plus Motor Grader Remove Snow Quickly

Cities interested in removing snow from their streets and roadways quickly, can attach this new snow loader to a No. 12 or No. 112 Caterpillar motor grader. The grader, says the company, is then transformed into an efficient one-man snow removal unit.

With the Rivinius snow loader, snow and ice are bladed into a power-driven fan, then blown directly into a dump truck or to the side of the travel lane. The blower is said to reduce bulk anywhere from 25- to 50%, and trucks are able to carry twice as much snow on each trip.

The power loss and frozen mechanisms ofttimes associated with open drives, are virtually eliminated with the hydraulically-driven Rivinius loader. Windrowing is dispensed with, and the operator is able to view the entire snow removal procedure.

Descriptive literature will be sent on request by Rivinius, Inc., Eureka, Ill. Write, or use the Post Card in this section. Circle No. 18.

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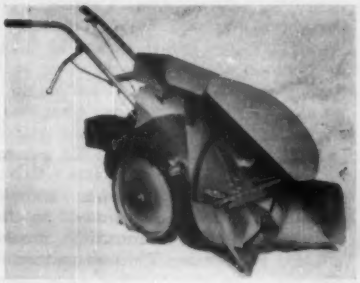
The driver can't go wrong when the information is given on Miro-Flex Signs, America's finest complete sign line. Their distinctive markings really stand out and are easy to read. All Miro-Flex Signs are embossed on zinc-coated, Bonderized steel, are finished with the best baked-on enamel, to assure durability. Can be had plain or reflectorized.

WRITE TO
THE MIRO-FLEX CO., INC.
1824 EAST SECOND STREET WICHITA, KANSAS

Use This Snow Plow On Sidewalks



Remove snow quickly from walks and ramps, school, hospital and other municipal grounds by the same method that snow is cleared from rail- and highways, advises one company. Use the self-propelled Jari Champion Rotary Snow Plow, powered by a 2½ hp, 4-cycle engine, and capable of clearing a 20-in. path in one pass and operating in drifts 36 inches high.

Equipped with a rotary rake that breaks up hard-packed snow, the unit is constructed with an open end to handle wet, slushy snow as well. Height and distance are cared for by an adjustable casting chute, while an independent clutch starts the engine without a load. Other features include hardened steel pinions that engage notches in the semi-pneumatic rubber tires, a 2-wheel drive, and an automatic belt tightener.

The new plow is manufactured by Jari Products, Inc., Minneapolis 8, Minn. For additional information, write the company direct, or you may use the Post Card on the colored page in this section. Circle No. 32.

Hammond Builds New Southern Plant

The Hammond Iron Works, Warren, Pa., announces the completion of a new plant on the outskirts of Birmingham, Ala. Fully equipped with metal forming and handling machinery, the plant will turn out elevated water tanks and stand-pipes, field-erected storage tanks, and general types of steel-plate construction.

The Birmingham plant, say company officials, is directly adjacent to rail and highway facilities, and will serve the southeast and central southwest states. Other Hammond plants are located in Bristol, Pa.; Provo, Utah; and Casper, Wyo.

A Watch-Pocket Surveying Instrument

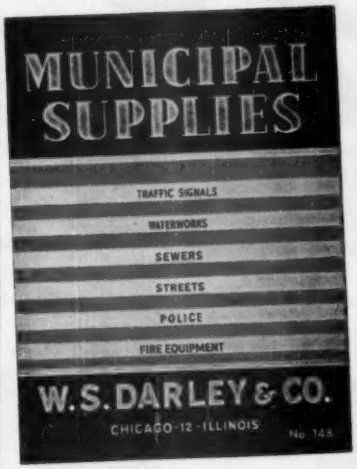
A small surveying instrument, actually watch-pocket size, the Wild Optical Square will, nevertheless, do a thorough job of laying out and checking buildings, concrete forms, pole lines, ditches and boundaries. It gives rough leveling, speeds cross section work, and provides a fast method of laying out simple curves.

The basic job of these Squares is to turn right angles. Regardless of how you turn the instrument in a horizontal plane, the line of sight remains at 90°, and all data are given in simple, right-angle calculations. The Square is never out of adjustment; it never requires setting up on a tripod.

The H. W. Wild Surveying Instruments Supply Co. of America, Inc., Main & Covert Sts., Port Washington, N. Y., offers the "watch pocket transits" in two types: the single-prism model, one pentagonal prism, that turns 90° angles; and the double prism model, with two pentagonal prisms turning 90° and 180° angles.

For an illustrated booklet explaining the working principle of both models, write the manufacturer, or use the Post Card on the colored page in this section. Circle No. 39.

NEW CATALOG!



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Model L40—4,000 to 5,000 cu. ft. air per minute at 130 MPH. Model L80—8,000 to 10,000 cu. ft. air per minute at 150 MPH. Write for complete data.

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PEST CONTROL EQUIPMENT
SOLD AND SERVICED

No drip—no run-off—spray when and where you want to with Hardie Aero-Mist. Records show more than 50% saving in labor and material cost by Aero-Mist concentrate spraying. Big volume, high velocity air stream carries the spray to the tops of the tallest trees. Official tests show mosquito killing horizontal coverage up to 1,000 feet.

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3825 Santa Fe Ave., Los Angeles 58, Calif.
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Please send catalog.
Name_____
Address_____
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I am especially interested in_____

(Adv.)

Six Chiefs Discuss Long-Lived Fire Hose

(An Editorial Reprint)

Hundreds of fire chiefs have furnished THE AMERICAN CITY with the footages of fire hose they maintain in their departments, and the makes. In a number of instances all the hose is of a single make. For instance, some cities use only Bi-Lateral fire hose, made by Bi-Lateral Fire Hose Co., 20 No. Wacker Drive, Chicago 6, Ill. Some of the chiefs explain why and also how they take care of their hose.

"Hose in our department lasts 18 to 20 years," writes Chief E. H. Kline of Columbus, Ind. His men wash the hose with soap and remove oil or grease from the jacket immediately after use. In the spring it is tested under 200 pounds pressure and in the fall it is flushed with water. Records are kept of each section and Bi-Lateral is used because it is easy to handle, makes a nice load and is durable.

"Records kept of each length of hose show some in service after 18 to 20 years," says Chief Louis Zimmer of the Township of Maplewood, N. J. When the hose has to be retired it goes to the Sewer Department which gets more years' service out of it. "Bi-Lateral has all the pliable features required of double jacketed," continues the Chief, "and we have had very few burst lengths; a first-class quality fire hose."

Hugh F. Fisher of Lansing, Mich., another Fire Chief who keeps records of every section of hose, writes: "We are using Bi-Lateral because it has proved safe, easy to load and handle, and gives us an average service of from 18 to 20 years."

"The policy in Champaign, Ill., is to buy 1,000 to 1,500 feet of 2½-inch hose every year, and I have standardized on double-jacket Bi-Lateral," says Chief R. W. Alsip. In Park Ridge, Ill., hose lasts an average of 17 years, says Chief Norman A. Brown. . . . Bi-Lateral is flexible and easy to pack in a hose bed."

Another Chief asks that his name and city be withheld, but his remarks are useful anywhere. Every section has a number stamped on it and the first digit tells the fire station where it is located. . . . Thus the men can tell which line to use when ordered to disconnect and pick up a given company's hose.

A hose card file* gives for each section the service, conditions, test data and date of purchase. Bi-Lateral hose is used on the basis of these records. Some of this hose, still in service, goes back to 1923, and each year it is tested under 150 pounds.

*Cards to start a hose record system of your own are available, free, by writing to the—

BI-LATERAL FIRE HOSE CO.

20 N. Wacker Drive, Chicago, Illinois

Purchasing News

Permutit Expert Discusses Water Softening

Chester H. Knowles of The Permutit Co., and Nancy Craig, woman's TV commentator.

"The average family spends over $200 each year trying to overcome the annoying effects of hard water." This figure, along with the fact that more than 38,000,000 homes in the U. S. are confronted with the hard water problem, was brought to the attention of housewives recently, by Chester H. Knowles, a water softening expert connected with The Permutit Co.

Speaking on the "Nancy Craig Time" program over WABC-TV, Mr. Knowles pointed to the advantages of using Permutit's model EMD Electro-Matic. This economical unit softens the incoming raw water supply by removing calcium and magnesium salts, clears the water of turbidity or silt, and removes normal amounts of iron and manganese.

"Hard water," said Mr. Knowles, "wastes money." You use more soap to get less suds, your washables wear out faster, and more fuel is needed for home heating and plumbing systems.

For details on the model EMD, write the Permutit Co., Dept. AC-12, 330 W. 42nd St., New York 36, N. Y., or use the Post Card on the colored page in this section. Circle No. 30.

STREET SWEEPER DRAG SHOES
COST LESS WEAR LONGER

Immediate Delivery

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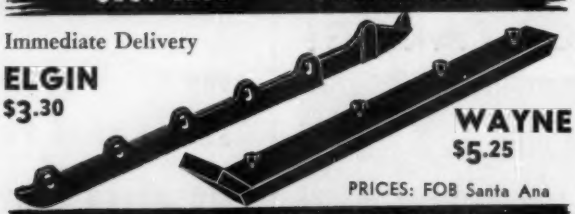
$3.30



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American Vacuum Leaf Loader
Solves your leaf or clean-up problem

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LEAF LOADER DIVISION
American Structural Steel and Tank Co.
21050 W. 8 MILE ROAD DETROIT 19, MICH.

1,600 New Sign Faces Help Drivers in Kentucky

The Kentucky State Highway Department installed first 100 'EZ-ON' traffic sign faces in the First District, and then another 500 faces followed by 1,000 more in 1953. This District embraces 13 counties and was chosen by the Department as the proving ground for this economical method of renewing old, unsightly signs. The

An 'EZ-ON' stop sign face after three years' service on Kentucky Highway 724, and E. Conyer and A. Barger of the Traffic Division of the State Highway Department.

faces, of 30-gage steel and reflectorized, fit over defaced or damaged traffic signs right on location without taking signs out of service.

The cost of the 'EZ-ON' traffic sign faces are said to be about half that of regular signs. Their application over the sign on location saves the expense of hauling signs to the shop and returning them to location. This was the feature that determined the Kentucky State Highway Department to use them extensively.

The manufacturer, Grace Sign & Mfg. Co. of St. Louis 18, Mo., produces these faces in two styles — octagonal and triangular — and in two sizes — 24-in. and 30-in.—for standard warning, regulatory, and special. For instance, the last 500 sign faces for Kentucky read NO PASSING FOR 500 FEET.

Cincinnati uses these sign faces, as do several county highway departments in Ohio, Iowa, and other states.

For detailed literature, write the manufacturer, or use the Post Card on the colored page in this section. Circle No. 9.

Plastic Buttons Replace Painted Lanes

Two metropolitan Detroit dailies recently printed a story and picture of the Mercury Marker installation in that city. Quoting the city's traffic department, the papers reported that 4,000 plastic markers had undergone a one-year test. As a result of this test, Detroit's traffic department was confident the markers would last four years, that they reflected light better, and that they would stand up under varying weather conditions.

These plastic buttons are simple to install. A caulking compound gun applies mastic, and the markers are seated securely with a special nail made by the Parker Kalon Corp. of New York City. The markers eliminate painting costs, also the traffic hazards resulting from smeared painted lines. They glisten day or night, in any weather.

Details on white and yellow Mercury Plastic Markers, are available from Mercury Plastics Co., 20787 Mound Rd., Van Dyke, Mich. Write directly, or use the Post Card on the colored page in this section. Circle No. 16.

for CAST IRON PIPE

CALL OR WRITE

McWANE Cast Iron Pipe Company, Birmingham, Ala.

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Sales Offices

Birmingham 2, Ala., P. O. Box 2601. Phone: 4-3521.
Chicago 1, Ill., 333 North Michigan Avenue. Phone CE. 6-9752.
New York 4, N. Y., 80 Broad Street. Phone: Bowling Green 9-7735.
Kansas City 6, Mo., 1006 Grand Avenue. Phone Harrison 2492.
Dallas, Texas, 3200 Maple Avenue. Phone: Riverside 5683.

PACIFIC STATES Cast Iron Pipe Co., Provo, Utah

Pipe sizes 2" thru 24"

Sales Offices

Provo, Utah, P. O. Box 18. Phone: 3200.
Denver 2, Colo., 1921 Blake Street. Phone: Main 0697.
Los Angeles 48, Calif., 6399 Wilshire Blvd. Phone: Webster 3-9108.
San Francisco 4, Calif., 235 Montgomery Street. Phone: Yukon 6-1421.
Portland 4, Oregon, 501 Portland Trust Bldg. Phone: Atwater 2815.
Salt Lake City, Waterworks Equipment Co. Phone: 4-1971.
Seattle, Wash., Smith Tower Bldg. Phone: Seneca 2680.

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for Superior Performance & Quality

T-10 Box Valve Locator
Only $115.00

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Your municipal ordinances must be, or should be, at the fingertips of every city official, employee and citizen of the city. There is but one solution:

1. Your ordinances must be codified. Each amendment must be accorded its proper place and all "deadwood" provisions eliminated. Your ordinances must be classified according to subject matter. They must be edited, and possibly amended, so as to meet and satisfy today's needs and conditions in your city.
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3. A complete and comprehensive general index must then be prepared.

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The answer is: Only a staff of Law Editors who possess
(a) Legal ability and (b) Editorial knowledge, training and experience.

We proudly "fathered" municipal Code work many years ago. We have completed and delivered Codes for hundreds of cities. Our Staff devotes its entire time to work on city ordinances. It's all we do—it's all we know.

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We will come to your city, confer with you, and meet with your governing body and submit to you a concrete proposal. This will be without any obligation to you.

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That's saving money and doing an unpleasant job at the same time.

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OUTDOOR DRINKING FOUNTAINS

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STREET WASHERS

Stops Fires Faster

This new John Bean fog fire-fighter carries its own water supply.

The 1954 Bean high-pressure fog fire-fighter continues the line of fast action fire-fighting units for stopping fires faster with less water damage. Quick in getting to the fire and starting to fight from its own water supply, the unit is widely used by rural departments.

Some of the features of the 1954 model are the John Bean pump that develops 850 pounds to deliver a nozzle pressure of 650 psi at 60-gpm; a 500-gallon water tank mounted for a low center of gravity; two spring-center live hose reels; four 100-ft. lengths of ¾-in. high pressure hose; and three Bean high-pressure guns.

For a complete catalog, write John Bean, Dept. 200, Lansing 4, Mich., or take advantage of the Post Card on the colored page in this section. Circle No. 15.

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Traverse City, Michigan

Manufacturers

Fire Hydrants and Valves

A.W.W.A. Specifications for Municipal and Industrial Work
Factory Mutual and Underwriters Approved for Automatic Sprinkler Installations.

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THE *New* AQUA VALVE BOX LOCATOR

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It's Magic! The new Aqua Extra Conductor development . . . an exclusive in the location instrument field!

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". . . greatly improved . . . no needle nervousness . . . pinpoint accuracy. The new Aqua has our unqualified approval!"
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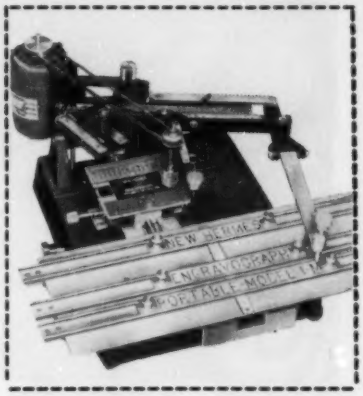

Portable machine, size of typewriter, operated by unskilled worker.

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THE *Dualtronic* COMBINATION PIPE & LEAK DETECTOR

The "Dualtronic" is acclaimed by Municipalities and Utilities throughout the world, because of the time and labor savings effected by one instrument doing the work of two so efficiently and effectively. Ruggedly built! Lightweight! One man operation! The "Dualtronic" is the answer how to cut costs 50%!

Lightweight! Rugged!

GOLDAK FEATHERWEIGHT MODEL 87 PIPE LOCATOR

Guesswork eliminated. Pinpoint location of pipes, mains, gates, tees, etc. One man operation, total weight 11 lbs.! Strong, positive location signal guaranteed by Licensed circuits and Microtuning, exclusive with Goldak. Lasts a lifetime, guaranteed performance.

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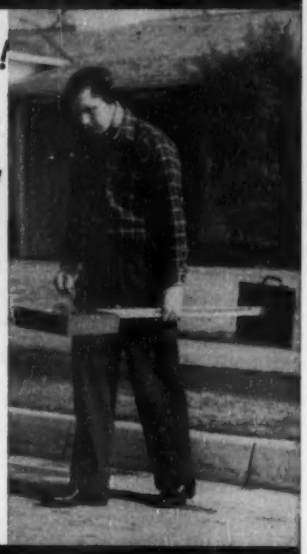

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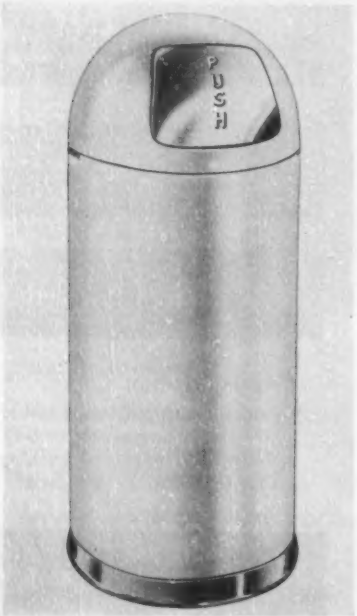
Purchasing News

New Round Top Receptacles Ready



Unit features self-closing door.

All models of the new Round-Top Receptacle with the chrome self-closing door, are now available in a variety of colors with a chrome dome or in all-chrome. Solidly constructed of one piece welded, heavy-gauge furniture steel, the Round Top is noted for its attractive appearance as well as its sanitation features. Delivery is immediate. Address United Metal Box Co., Inc., 172 Seventh St., Brooklyn 15, N. Y., for further information, or use the Post Card on the colored page in this section. Circle No. 41.

A Simplified Meter for Water and Sewage Plants

All of the advantages and none of the headaches involved in water and sewage metering, are the lot of the operator who equips his plant with the Foster flow tube.

Used to meter water and sewage, the Foster flow tube has a short length that permits installation in virtually any section of pipe line. It doesn't require straight runs of pipe before or behind it, except when valves are close by. Its length is normally about 1 to 1½ pipe diameters.

The tube has a commendable record of installations that demonstrate its high accuracy. Moreover, its accuracy is easily maintained. The tube offers a negligible resistance to flow, thus does not boost power costs. Simple installation renders unnecessary the expensive masonry vaults commonly required in other installations.

For full information on the Foster flow tube, write directly to the Foster Engineering Co., Union, N. J., or you may use the Post Card located for your convenience on the colored page in this section. Circle No. 35.

New Atlas Representative

O. A. DeCelle & Associates, 4900 W. Madison St., Chicago, Ill., will represent the Atlas Mineral Products Co. in the Midwest, according to recent reports. This entails the sales promotion of Atlas water and sewer jointing materials.

The Atlas Mineral Products Co. is located at Mertztown, Pa.

Better Lighting for Schools and Hospitals

New Van Noorden skylight is said to have a white transmission of 92%.

Communities throughout the country are currently engaged in building municipal plants and schools, city hospitals and other public structures.

To operate efficiently, most authorities agree that these buildings should incorporate a low-cost, 3-way functional skylight that harmonizes with the architecture and diffuses light evenly throughout each room. The skylight should assure weather-tight, clear-day lighting benefits under all conditions.

E. Van Noorden Co., Boston, Mass., has developed the Vanco Plexiglas Domelite, a new skylight that does away with the need for artificial lighting during the day. There is clear, colorless plexiglas for corridors and warehouses, which absorbs ultra-violet rays and projects light beams without fading fabrics. Also white translucent plexiglas that softens and evenly diffuses light, absorbs heat and reduces glare. The latter is best suited to schoolrooms, hospitals and factories

The Domelite is quick and simple to install, and is said to provide 24% more light than other skylights of similar size. It is available, individually packed, in square, round or rectangular shapes, in dimensions from 20 x 20 to 64 x 96.

For full information, write the company direct, or you may use the Post Card on the colored page in this section. Circle No. 44.

Arm Chair Meter Readings

Even when the plant master meter is in a pit 40 feet underground, and the superintendent's office is on the third floor of the plant building, he still can have the recorder in front of his desk and be sure of a reading that is right on the button. He can if he is using the new Laminair pneumatic transmission equipment. Difference in elevation does not impair the accuracy of the instrument. Rate of flow gauges utilizing the Laminair principle are capable of operating within a range varying from a predetermined maximum flow down to 15% of the maximum with an average error not exceeding 3% over any point. The gauge can be used to good advantage in measuring flow through rate-of-flow controllers in water filters.

The instrument translates fluid pressure into air pressure in a mechanism that balances a single air pressure against any differential pressure produced by a venturi tube, flow nozzle, or orifice plate. This pressure can then be transferred to a recording instrument located on the Superintendent's desk if desired.

The Laminair system is a development of the Simplex Valve and Meter Company, 68th and Upland Sts., Philadelphia 42, Pa. For additional data, write the company direct, or use the Post Card on the colored page in this section. Circle No. 45.

How to Cut Cleaning Costs with

Bennett Bilt

WASTE RECEPTACLES

IN YOUR CITY

Everybody is automatically a member of your cleaning department by conveniently placing Bennett Bilt Waste Receptacles to invite their use. These waste receptacles are sanitary, economical and a major help to cleanliness and neatness. Put them to work for you and reduce cleaning costs.

Only

BENNETT

WASTE RECEPTACLES

HAVE ALL THESE FEATURES

- Non-rusting stainlesss steel feet eliminate rusting and rust marks
- Made of extra heavy-gauge corrosion resistant steel
- All welded construction
- Smooth exterior surface...nothing to catch and tear clothes
- Reinforced corners
- Self-closing mechanism assures closed doors when not in use and permits easy opening of independent doors with finger-tip pressure
- Rounded corners for structural strength and pleasing appearance
- Baked enamel finish...green, gray or white

● These are a few of the many features that make Bennett Bilt Waste Receptacles a natural "buy". Quality and every consideration for hard usage are self-evident both inside and outside of these receptacles.

●

FILL IN AND MAIL COUPON TODAY ▶

THE BENNETT MANUFACTURING CO.
ALDEN, N. Y. **Dept. AC-1-54**

Kindly send to my personal attention a FREE copy of the fully illustrated Bennett Bilt Waste Receptacle Catalog.

*Name*_____

*Organization*_____

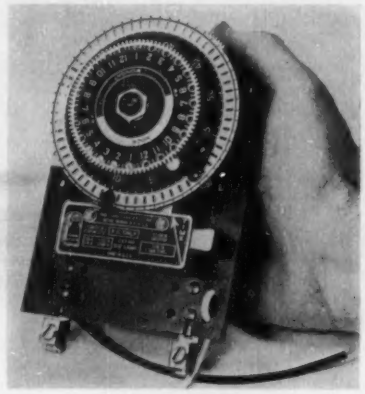
*Street*_____

*City*_____ *State*_____

Time-Control Operation for Sewage-Treatment Plants

Automatic short operation control in sewage treatment plants and other municipal services is facilitated by this combination dial for time switches. One Tork dial enables automatic time switches to control both long and short operations. It consists of a 24-hour dial mounted on a 60-minute dial, and permits the control of operations from 1 to 55 minutes at any or all hours of the day. Here is how it works:

If a 12-minute operation is required five times a day, pin trippers are inserted into the holes at the specified hours on the 24-hour portion of the dial. These pins trip the switch into the ON position by activating the swinging lever set in the "O" position on the outside 60 minute dial, and the time-switch automatically starts the operation at these hours. The OFF lever tripper is set at the 12-minute mark on the minute dial, and automatically turns the switch off at the required time, stopping the operation. Once set, the switch requires no further adjustment except, of course, to change time cycles.



New Tork dial.

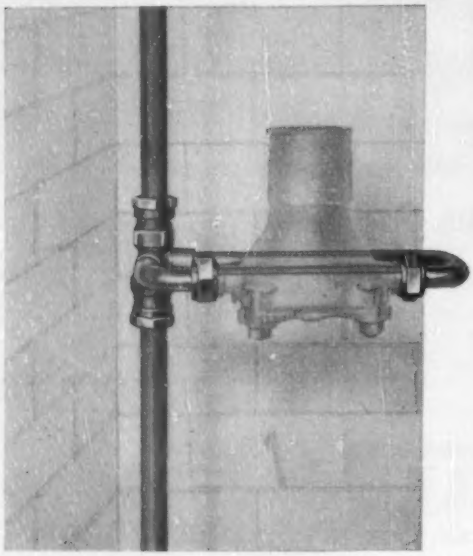
These combination dials may be used to replace ordinary 24-hour dials on most time switches. For full information, write Tork Clock Co., Inc., Mount Vernon, N. Y., or take advantage of the Post Card on the colored page in this section. Circle No. 47.

More Outboard Motor Pep, No Shimmy

Police departments, fire and rescue crews who have wanted an outboard motor with a little more horsepower, that can be used on smaller craft now have an aluminum-clad answer, according to W. J. Webb, general manager of Evinrude Motors, Dept. C, 4243 N. 27 St., Milwaukee 16, Wis. Mr. Webb reports the company's development of a new 7.5 hp outboard, the Aquasonic Fleetwin, that eliminates 85% of the motor vibration.

The noise-free vibrationless operation in the Aquasonic Fleetwin, continues the Evinrude official, is achieved by floating the motor in mountings of springs and rubber, and by the incorporation of carburetor turbo-silencers. "Now," he says, "the boating public has all the advantages of the extra power and planing speed of a 7.5, combined with smoother, quieter operation than is offered by most motors of much smaller horsepower."

The Aquasonic Fleetwin will power a runabout at from 1- to 17 miles per hour, and features a full gearshift, separate fuel tank, and auto-lift hood. For further details, write the company direct, or you may use the Post Card on the colored page in this section. Circle No. 46.

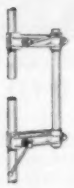


For Setting Meters in Basements

EASY TO INSTALL

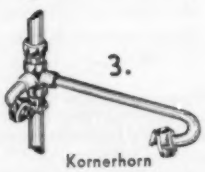
The KORNERHORN

In a vertical basement pipe, against the wall or in a corner, the Kornerhorn makes a most satisfactory meter setting. Installation is fast and economical as pipe threading is eliminated. Send for detailed information.



1. Cut supply line. Clamp not necessary but convenient

2. Add Connections



3. Kornerhorn in place

When Valves are Needed

Ford Kornerhorn valves installed on the supply side, or on both sides of the Kornerhorn add extra convenience and cleanliness when meters are changed.

THE FORD METER BOX COMPANY, INC.

FOR BETTER WATER SERVICES

Wabash, Indiana

FORD

Coin-Operated Parking-Lot Gates

Em-Ro coin-operated parking lot gates are new only in their application to parking lots. Long and successfully used to protect traffic at bridge approaches, these gates are manufactured by the Western Railroad and Supply Co., maker of automatic railroad-highway crossing gates and signals. They are sold only through Em-Ro Distributors, 120 S. LaSalle St., Chicago, Ill.

Two gates are used—one at the entrance and one at the exit of the lot. To enter, the patron drops the coin into the slot, whereupon the gate rises. A second patron cannot enter the lot without inserting a coin, for as the rear wheels of the car pass over the treadle in the ground, a second impulse causes the gate arm to lower.

To leave the lot, the customer drives to the coin-operated "exit" gate and follows the same procedure used to enter. For customers renting parking space on a monthly basis, a key service is available with changeable locks to assure rent collection. A remote control device is also available to operate the gate without getting out of car.

Get further facts from the company direct, or you may use the Post Card in this section. Circle No. 23.

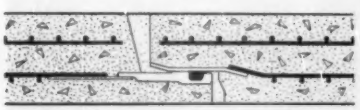
Insert quarter to enter, and leave by the same method.

Sewer Pipe Incorporates Special Joint

Used successfully on pressure pipe, this special joint was recently incorporated into Armored Joint, a new reinforced sewer pipe introduced by the Universal Concrete Pipe Co., 297 S. High St., Columbus 15, Ohio. The pipe has steel joint rings, and rubber gaskets that guard against leakage and infiltration.

Embedded in the concrete wall, the rings are welded to the pipe's steel reinforcement. The gasket, on the other hand, is seated in a special groove in one ring, where it is confined and protected. The complete joint provides ample flexibility, permitting normal contraction, expansion, and deflection.

The company has constructed the new pipe in long lengths, insuring simple, speedy installation. Armored



Joint may be obtained to meet any standard specification for reinforced concrete pipe.

Get additional data by writing the manufacturer direct, or you may use the Post Card on the colored page in this section. Circle No. 33.

HYDRAULICALLY OPERATED VALVES

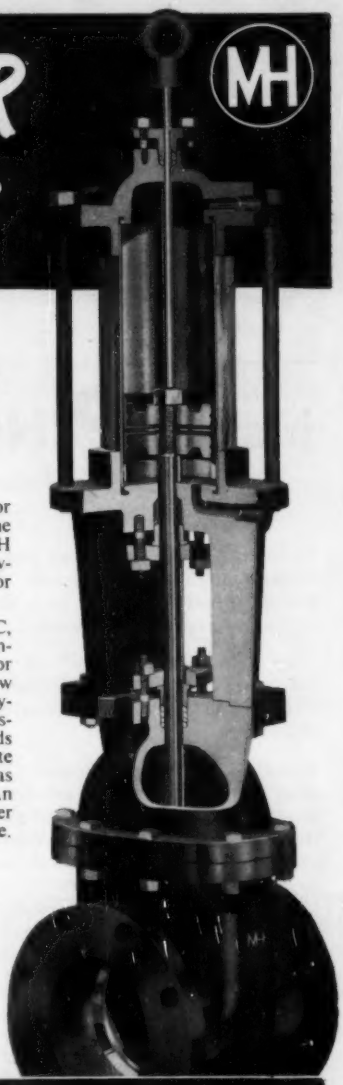
Put WATER To WORK

MH

SEAMLESS BRASS CYLINDER OR BRASS LINED

For frequent operation, remote control or for inaccessible valves, you may use your pipe line water pressure for opening and closing M & H hydraulically operated valves. If desired, however, cylinders operate equally well using oil or air pressure.

All M & H Gate Valves, Classes A, B and C, may be ordered equipped with hydraulic cylinders—brass tube cylinders as illustrated, or brass-lined cast iron cylinders. Outside screw and yoke can be installed to operate the hydraulic valve manually in event operating pressure fails. A bronze tail rod which extends through the top of the cylinder cover to indicate the position of the gates may also be used as a pull rod to operate the gate, if necessary. An adjustable stop may be installed on the cylinder cover to control the degree of opening of the gate.



The size of the cylinder depends on the size of the valve, water pressure available for hydraulic operation, and water pressure against the gates. For complete information, write or wire M & H VALVE AND FITTINGS COMPANY, Anniston, Alabama.

M&H PRODUCTS FOR WATER WORKS • FILTER PLANTS INDUSTRY • SEWAGE DISPOSAL AND FIRE PROTECTION

Flashers for 5 Cents Per Year

A new cold cathode identification signal flasher for attaching to any fire-alarm and police-signal box without additional power supply lines consumes only 0.1 watt. Operating 24 hours a day for a full year would cost 5 cents at 5 cents per kw-hr.

Visible for one mile, the flasher can vary from 30 to 120 flashes per minute. The unit is encased in a sealed cast-aluminum box that is both tamper- and weatherproof.

While the flasher's primary purpose is to identify fire and police boxes, it also serves as an automatic trouble shooting device for defective fire and police boxes. It weighs 4⅛ pounds, and measures 4 x 3½ x 8 inches.

The Haledy flasher is operated directly from a 115 volt AC line. Where 115-volt AC is not available, it can be directly connected to the signal box circuit line with 115-volt AC superimposed on such signal line circuits at Signal Headquarters. This latter method is also accepted by the National Board of Fire Underwriters.

For further information write Haledy Electronics Co., 57 William St., New York 5, N. Y., or take advantage of the Post Card on the colored page in this section. Circle No. 36.

Haledy's new cold cathode fire and police box identification flasher, with one mile visibility, on a fire box located in Los Angeles, Calif.

Opens Sales Office In Salt Lake City

The Chicago Bridge & Iron Co. reports the opening of a sales office in Salt Lake City, Utah. Located at 500 W. 17th South St., the new office is headed by J. Graham Daniels, who has been transferred from the company's Tulsa office.

Chicago Bridge & Iron maintains its headquarters at 2127 McCormick Bldg., Chicago, Ill.

just a PINCH OF SALT

is all you need for efficient, low-cost Ice and Snow Control.

½ *ounce* of de-icing *salt* per square yard, applied *the "Scotchman-Way"* is all you need. Why? Because *the "Scotchman", the air-blast spreader,* lays down a *perfect melting pattern*—no rings, no streaks, no waste.

The "Scotchman-Way" of winter pavement maintenance is *50% CHEAPER* and *8 times FASTER* than using treated abrasives.

Here's a Modern spreader: 1. that spreads *bagged or bulk material,* from *any truck* at any desired rate; 2. that has *more stainless steel* in its construction; 3. that is *self-powered* by an *electric starting engine* operating in filtered air; 4. that *saves its cost* in the first few hours of operation.

The "Scotchman-Way" Saves: Materials, Time, Lives.

TARRANT MFG. CO.

East Ave. Saratoga Springs, N. Y.

BETTER HOSE CARE—WITH

CIRCUL-AIR

THE AIR CONDITIONING

FIRE HOSE DRYER

Circul-Air is the patented, electrically operated hose dryer which circulates prewarmed fresh air through coiled wet hose at the rate of 5 to 6 air changes per minute. It's designed to lengthen hose life, improve the appearance and functional design of new fire houses, and to save floor space and hard work. No other drying method is so fast—so economical—so easy to use.

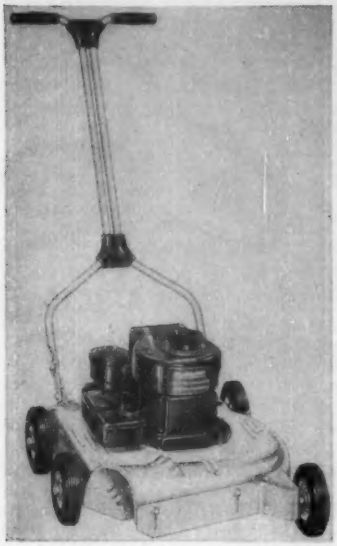
Circul-Air Dryers have passed the Approvals Tests and are listed by the Underwriter's Laboratories, Inc., Chicago and the Canadian Standards Association.

Write for Catalog TODAY

THE CIRCUL-AIR CORPORATION

575 East Milwaukee Detroit 2, Michigan

Introduces Smaller Lawn Mower



The 18-in. Cooper Cyclo-Mo.

A smaller model of a well-known rotary power mower is introduced by the Cooper Mfg. Co., 454-456 S. First Ave., Marshalltown, Iowa. It is the 18-in. Cyclo-Mo, powered by a 4-cycle, 1.6 hp engine, and equipped with an adjustable front grass chute that delivers grass cuttings in the form of a fine mulch. This latter device does away with windrowing, raking, and trimming.

Like its predecessor, the 20-in. Cyclo-Mo, the smaller unit has a wheel placement that enables both mower and cutting blade to follow the contour of your lawn. It provides a closer trim and avoids scalping. A simple height adjustment (1½- to 3½ inches), facilitates the cutting of high grass and stubborn weeds.

The Cooper Mfg. Co. will send further information on request. Write directly, or use the Post Card on the colored page in this section. Circle No. 22.

Fire Alarm is the Fastest

The newest and best fire-fighting equipment of the best fire department in the world, can not put out a fire until it gets to it. The municipally-owned fire-alarm system is designed to promote prompt action by the municipal fire department.

What the fire-alarm system should mean to the store owner, manufacturer, and to the ordinary citizen is attractively set forth in a new 26-page booklet, illustrated in color, entitled "The Economy of a Fire Alarm System." It points out that a fire once started is one event that cannot be safely neglected. It is often the seed of a conflagration. A store or a plant burned down will be a tremendous economic loss to a town. Reporting it by box brings the fastest and surest response. The box announces its location by a bell in fire alarm headquarters that rings for instance 2-4-3. There is no wordy message to be garbled.

An ideal layout of a fire-alarm box system for visibility is given in the booklet. Also given is an outline of insurance benefits. For a free copy write The Gamewell Co., Newton Upper Falls 64, Mass., or use the Post Card in this section. Circle No. 43.

LET THE PUBLIC keep your STREETS and PARKS CLEAN . .

Use NORWICH Street and Park Baskets

83-C

CONSTRUCTION

8 Ga. Wire Mesh.
8 Vertical Braces with Interlocking Ring.
3½" Deep Sheet Metal Pan.
Angle Iron Ring.
Reinforcing Bottom.
Hot Dip Galvanized after Fabrication.

34" Deep.
22" Top.
18" Bottom.
Approx. wt. 43 lbs.
6" x 16" Blank Sign Plate

Write today for full details.

NORWICH WIRE WORKS, INC.
NORWICH, N. Y.

What's New...
IN ELECTRIC HAND DRYING

Everything!

IN THE NEW "C" MODEL ELECTRIC-AIRE Hand Dryer

New Aerodynamic Engineering and Modern Styling!

New Built-in Electric-Lighted Instructions for Drying!

New 360° Revolving Air Baffle!

New Permanent Type Air Filter!

New Touch Action Starter Bar!

Plus 7 OTHER NEW FEATURES making Electric-Aire the fastest drying, most economical and dependable dryer ever made—all at a new low cost!

You are entitled to ALL the facts! Mail this coupon.

Electric Aire ENGINEERING CORP.
209 W. JACKSON BLVD., CHICAGO 6, ILL.
ELECTRIC AIRE Co. of CANADA
669 TALBOT STREET ST. THOMAS, ONTARIO

Gentlemen: Send me —
____ Illustrated literature of the new features with all the facts.
E ____ A brief demonstration on my premises — at no cost or obligation to me.

NAME
ADDRESS
CITY ZONE STATE
PHONE NUMBER

Efficient Brush Cutter Works For Less

If a simple, lightweight brush-cutting machine is what you have in mind, you should be interested in the new Brushmaster, a low-cost device that will clear brush, brambles, vines, etc., as well as all undergrowth, including saplings up to 4-inches in diameter, quickly and effectively.

Weighing some 35 pounds, the unit is easily operated by one man, and is powered by a 2-cycle, air cooled motor. Carrying is facilitated by the sling type suspension belt that protects the operator from moving parts. The shaft-driven circular saw blade is simple to replace by releasing a single nut and flange.

Each Brushmaster is equipped with a special angular safety bar that permits the operator to swing the saw high or low, and prevents him from stumbling forward into the blade. An

engine throttle located at hip level, gives him instant control of the unit, while an automatic clutch disengages the blade when the engine is idling.

The Brushmaster is a product of Brushmaster Saw, Inc., a subsidiary of the 80-year-old Harrington and Richardson, Inc. For additional data, write Brushmaster Saw, Inc., 80 Emerald St., Keene, N. H., or you may use the Post Card on the colored page in this section. Circle No. 49.

KOHLER ENGINES

4-CYCLE
AIR-COOLED

K160

K90 3.6 H.P.
K160 6.6 H.P.
K330 12.0 H.P.
K660 26.8 H.P.

Kohler Engines are engineered and manufactured to the high standards which have made the Kohler mark known for quality the world over.

Power for garden tractors, pumps, sprayers, snow removal equipment, grain elevators, hoists, portable saws, concrete mixers, compressors, industrial lift trucks.

Write for information

K330

K660

Kohler Co., Kohler, Wisconsin
Established 1873

KOHLER OF KOHLER

PLUMBING FIXTURES • HEATING EQUIPMENT • ELECTRIC PLANTS
AIR-COOLED ENGINES • PRECISION CONTROLS

Facilitates Seating at Spectator Events

According to Seating Inc., 3565 Wooddale Ave., Minneapolis 16, Minn., municipalities can sustain year 'round spectator programs—in- or out-of-doors—without installing expensive permanent bleachers. They can do this by using portable, demountable bleachers that are both safe and comfortable, and are designed to handle every conceivable seating requirement.

Sico bleachers, reports the manufacturer, adapt to all types of spectator events. They can be towed to any location by truck or tractor. They are quickly assembled and easily dismantled, at the same time, retaining adequate structural strength to sustain a maximum load plus.

To provide the greatest comfort, the company has designed both footboards and seats entirely free of obstructions. Ample space has been included between the seat rows, and leg room is assured by adequate distance from seat to footboards.

In addition to other advantages, three Sico bleacher units, each 12 feet long, combine to form 48 feet of linear seating capacity, thereby seating a fourth spectator for the cost of the first three. The units, placed six feet apart, are bridged by an extra 12 feet of seat and footboards.

Municipal officials interested in these low-cost steel units can get further information from the company. Write direct, or use the Post Card on the colored page in this section. Circle No. 31.

Traffic and Safety Signs—Immediate Delivery

A complete line of traffic control signs, safety signs, highway signs, and traffic buttons can be delivered immediately by Sargent and Sowell, Inc., 1211 E. Jefferson St., Grand Prairie, Tex. These signs are made of USS Number 16 gauge steel and are finished in baked enamel. They are available with glass spheres over the complete sign surface for reflection.

The traffic buttons are 3 or 4½ inches in diameter and are made of concave pressed steel. They come in the conventional baked white and baked traffic yellow.

For an illustrated folder, address the company direct, or use the Post Card located for your convenience on the colored page in this section. Circle No. 6.

IF YOU HAVE EXPERIENCED

Water Shortage—Surge—Unnecessary Waste

INSTALL ROSS VALVES FOR CONTROL OF WATER STORAGE, SUPPLY CONDUIT AND DISTRIBUTION PRESSURES

ROSS SINCE 1879

MANUFACTURERS OF AUTOMATIC HYDRAULIC CONTROL VALVES AND SPECIALTIES

PRESSURE REDUCING VALVE

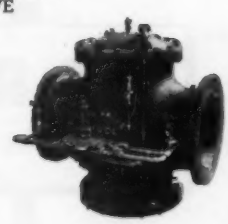
SURGE RELIEF OR BACK PRESSURE VALVE

OTHER ROSS PRODUCTS:

FLOAT VALVES
STRAINERS

HYDRAULIC BOOSTER PUMPS FOR CHLORINE FEED

HYDRAULIC AND ELECTRIC CONTROLLED VALVES



ALTITUDE VALVE

ROSS VALVE MFG. CO. INC.

8 Oakwood Ave. Troy, N. Y.

AMERICAN

Approved

PLAYGROUND EQUIPMENT

Unsurpassed in Design, Safety and Performance

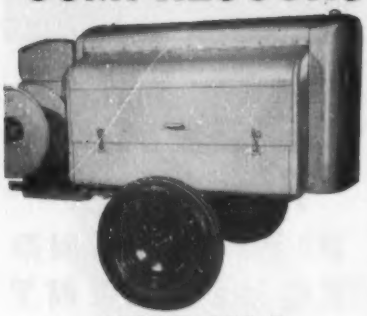
● It's the *plus* factor that makes American the most respected name in Playground Equipment . . . *Plus* in design—American leads the field. . . . *Plus* in performance—*Approved* Equipment stronger, more ruggedly built to assure a lifetime of perfect repair-free service . . . *Plus* in safety—for American craftsmen are aware of their responsibility for the safety of your children. Thus, with American you receive far superior design and performance and unmatched safety.

WRITE FOR LITERATURE

AMERICAN
PLAYGROUND DEVICE CO.
ANDERSON, INDIANA U.S.A.
WORLD'S LARGEST MANUFACTURERS OF FINE PLAYGROUND & SWIMMING POOL EQUIPMENT

GET YOUR COMPRESSED AIR FOR LESS with

smith COMPRESSORS



MODEL 105-P
POWERED BY CHRYSLER INDUSTRIAL ENGINE

You *can* reduce costs today, by using a Smith 105-P for the *majority* of your compressor work! Delivers 105 cu. ft. per minute — combines heavy duty with light weight; easily portable. Chrysler Ind. 15 Engine has 6 cyl., 4" bore, 5" stroke, 377 cu. in., 3" crankshaft, 7 main bearings, sodium cooled valves and Stellite valve seats for heavy duty, long life. Compressor valves — stainless steel disc type with Manganese Bronze seats. Improved type pilot valve and simplified control.

SEND COUPON FOR LITERATURE & PRICES

GORDON SMITH & COMPANY
425 College Street
Bowling Green, Ky.
Send complete literature and prices on the low-cost 105-P Smith Compressor.
NAME_____
ADDRESS_____
CITY_____ STATE_____
☐ Also send name of nearest dealer.

Purchasing News

For Street Construction And For Maintenance

The Highway Equipment Co., Inc., 643 D Ave. N. W., Cedar Rapids, Iowa, introduces the Model E Hi-Way Spreader, a truck-mounted unit that will spread sand, aggregate, calcium chloride, cinders, salt and pea gravel for seal coat work, street stabilization, and dust and ice control.

Redesigned from previous company models, the new motor-driven spreader is fully equipped, and may be quickly mounted or dismounted from the truck frame.

For full information on the Model E Hi-Way Spreader, address the manufacturer direct, or you may use the Post Card on the colored page in this section. Circle No. 26.

No. 3X
Frame length 37¼"
Frame width 15"
Capacity ¾" to 2" Pipe

A ONE MAN MACHINE

Push Pipe
Summer & Winter
Push Pipe

WRITE FOR NEW CATALOG SHOWING COMPLETE LINE OF PIPE PUSHERS AND PRICES.

GIANT MANUFACTURING CO., COUNCIL BLUFFS, IOWA

FOR RENT
Sewer Cleaning Equipment

Thomas Drain Service
Home Office - 35 S. College St., Akron 8, Ohio
Collect Phone Calls Accepted
Call Blackstone 2212 Akron, Ohio

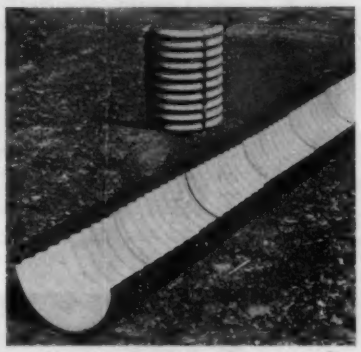
- Most municipalities are not equipped to cope with the problems presented by their sewers, the cost of sufficient equipment to maintain the sewers is prohibitive.
- We will rent this equipment to you, and supply a man to supervise its operation.
- May we tell you more about this economical method of sewer maintenance?

Culvert Pipe That Saves Space

A nestable type culvert pipe that is simple to pack, ship, and apply is introduced by the Wheeling Corrugating Co. Molded of corrugated galvanized sheets 25½ inches wide, the pipe is curved to form short, half-circle sections, several of which are nested together with nuts and bolts attached in a separate carton. This facilitates handling and saves storage space.

Street officials should appreciate the fact that it takes only one tool to install this culvert pipe; a structural wrench. The longitudinal edges of each section are formed with flanges in which slotted holes have been provided for bolting the sections together. Sheets are corrugated ½-in. deep, with a 2.66-in. spread from center to center of corrugations. The sections are 25½ inches long, and every two sections, when assembled, result in a 24-in. length of full circle pipe from center to center of the lapped corrugations.

The company will furnish nestable type culvert pipe in either a copper-steel combination or pure iron, with a galvanized coating of 2-ounces per square foot. Each shipment includes square head bolts and hexagonal nuts that are easily assembled in the field.



Sections are constructed 25½ inches long. Two sections, when assembled, make a 24-in. length of full circle pipe from center to center of the lapped corrugations.

A more detailed description of the pipe is available from Wheeling Corrugating Co., Wheeling, W. Va. Write directly, or use the Post Card on the colored page in this section. Circle No. 19.

TAX EQUALIZATION APPRAISALS

THE J. M. CLEMINSHAW CO.

Appraisers

Nationally Recognized for
Municipal and County Revaluation
Since 1923

An Authoritative Professional Service
Universally Accepted by Assessing Officers
and the Taxpaying Public

Write for Brochure and Client List

Main Office:
1132 Union Commerce Bldg.
Cleveland 14, Ohio

District Offices:

Hohokus, N. J.	50 Edgewood Dr.	Tel. Ridgewood 6-4883
Plainville, Conn.	11 Williams St.	Sherwood 7-0676
High Point, N. C.	100 So. Main St.,	Tel. 8957
Des Moines, Iowa	Savings & Loan Bldg.	Tel. 3-5154
Milwaukee, Wisc.	2014 Sunset Court	Tel. Spring 4-8934

REPLACE troublesome VALVES With . . .

EDDY
MECHANICAL JOINT
GATE VALVES

Old and troublesome valves . . . or too few valves in a distribution system . . . can be responsible for dangerous and costly slow-down or shut-down of water supply for every day use or, more serious, when badly needed in event of an emergency. Now is the time to make replacements and to install new valves where conditions show the need for so doing. The Eddy Valve, bronze mounted throughout, with mechanical joint connections (only a ratchet wrench needed) is best for easy installation . . . for easy operation . . . for long life trouble-free service.

Write today for prices and delivery date for valves needed to modernize your water distribution system.

EDDY
VALVE COMPANY
A Subsidiary of James B. Clow & Sons
WATERFORD, NEW YORK

Some New Sewage Instruments

The O-R potential, a factor that is making the time-honored BOD hustle for top billing in the sanitation field, drew a lot of interest to the Foxboro booth at the FSIWA Miami meeting. Foxboro's O-R Potential Recorder Dynalog supplies an easy way to measure this important quality in sewage and industrial wastes.

Another Foxboro attention getter was its Consotrol recording-controlling systems. Virtually any type of recording and controlling was demonstrated on the compact control board. To show how it operated, the exhibit included a flowing circuit of water circulating through an orifice plate with a differential-pressure cell to the Consotrol recording-controlling system. The recorder made a continuous record of both temperature and flow of water.

O-R potential as a measure of quality in sewage treatment, plus pneumatic transmissions of flows were demonstrated in the Foxboro booth at the Miami meeting of the FSIWA.

Full data may be obtained by writing the Foxboro Co., Foxboro, Mass., or use the Post Card on the colored page in this section. Circle No. 3.

Gate rises when coin is inserted; lowers seven seconds after rear wheels clear treadle. (Remote control from drivers' seat available as optional equipment.)

Solve the parking dilemma . . . gain important new revenue

Install

SELF-SERVICE PARKING

USING EM-RO

coin-operated parking lot gates*

No wonder community officials, merchants, and shoppers are enthusiastic about this new, modern, low-cost method of off-street parking. Just look at its advantages:

- No car jockey or attendants necessary. Coin-activated gates rise automatically when coins are inserted.
- No additional policemen are required. One man can collect from and service as many as 50 parking lots per day.
- Em-Ro gates are easy to install, and entail no complicated service problems. New only in their application to parking lots, these gates have long been used by the railroads for grade-crossing traffic protection. The mechanism is foolproof.

* Can be leased for less than $3.00 per day, per gate —or purchased outright.

Before you change or expand your present parking setup, get complete information about Em-Ro gates. Write, wire or phone now. (24-hour switchboard.)

EM-RO DISTRIBUTORS

120 S. La Salle St. Phone RAndolph 6-4560
Chicago 3, Illinois

Keeps Public Grounds Brush-Free

Cut brambles, vines, bushes, and any type of undergrowth with a new, lightweight brush-clearing device that attaches to a Hoffco power unit. This latest company development is called the Brushette, and is equipped with a special blade set at a 45° angle, that cuts level to the ground, removing stumps and stubble.

A shock absorber has been built into the Brushette. Should the unit hit a stone, fence post, etc., most of the shock is absorbed, protecting both machine and operator. The circular blade itself, is protected by a butterfly-shaped guard. This means that the cutting mechanism is only permitted contact with the brush to be leveled.

Along with the Scythette, Trimette and Sawette, the new Brushette is interchangeable on a 2-hp Hoffco power unit. The current mechanism has a cutting head weighing 6-pounds; combined with the power unit, it weighs 26 pounds.

Full details are obtainable on request from Hoffco, Inc., Richmond, Ind., or take advantage of the Post Card on the colored page in this section. Circle No. 27.

"Free Time" on Parking Meters

The original purpose of parking meters was to remove the all-day parker from the busy business curbs, to provide greater turnover of cars desiring to park for business, and by making spaces available, to cut down cruising. In the early years nearly all parking meters allowed an hour's parking for a nickel. So keen was the municipality's desire to accommodate as many cars as possible that the use of pennies for 12-minute periods soon became popular. No matter what method was used, some "free time" usually remained on the meter dial after the parker drove away.

The desired objectives were achieved by the parking meter. Cruising was cut down but not eliminated, as some drivers will cruise for a meter with enough unused time on it to permit him to perform his errand and depart without costing him a coin.

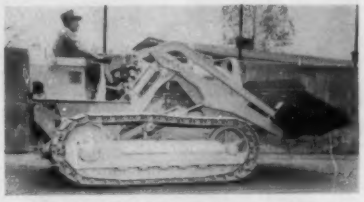
This aspect of "free-time" parking was stressed by Leo E. Van Lahr at the Parkit-Lockit booth at the November 1953 conference of the National Institute of Governmental Purchasing in Cincinnati. His meter does not have a clock. The motorist drops a coin in the slot and it remains a visible evidence of payment until an officer or attendant lets it fall into the coin box and marks a tire. On his next round, any car with a tire mark is parked overtime. For more facts, write The Parkit-Lockit Co., Newtown (Cincinnati), Ohio, or use the Post Card on the colored page in this section. Circle No. 40.

Improved Bucket Added To HT4 Shovel

Excavating and stockpiling operations call for a flexible shovel with a suitable bucket as standard equipment. The improved 2-position bucket for the Caterpillar HT4 Shovel provides this needed flexibility by incorporating an adjustable pitch and deep bowl. Positions are achieved by changing the removable pins on each side of the bucket to forward or rear hinge points.

The forward hinge point is for stockpiling, and has a 10° rack-back at the ground line resulting in a quicker tilt back and less spillage. A simple adjustment connecting the bucket to the rear hinge point, retains the former digging and dumping angles desirable for excavating work.

Full data on the improved bucket, complete with redesigned bucket teeth, is available on request from Caterpillar Tractor Co., Peoria 8, Ill. Write, or use the Post Card on the colored page in this section. Circle No. 21.



Caterpillar HT4 Shovel, complete with the new top-position bucket.

Trouble-Free Trickling Filter Floor

A better floor system for trickling filters attracted the attention of sewage-works men attending the FSIWA meeting in Miami, Fla. The new floor system, known as IMCO, uses relatively small-sized blocks, easily laid, shaped so that they can be fitted to virtually any design requirements.

The floor supplies maximum aeration, about 40% open with no rock on the blocks, or 25% open with the rock in place. The blocks are strong enough to permit the rock being placed on the floor directly by clam shell. The channels also can be kept clean easily by placing a strong building paper, such as Sisalcraft 9 inches wide, in them prior to the rock-placing operation. Any rock that drops through the filter block onto the channels can be removed easily by pulling out the building paper as the stone loading process progresses.

The floor is a product of Industrial Materials Co., Somerset St. and Trenton Ave., Philadelphia, Pa. For detailed information, write the company direct, or you may use the Post Card on the colored page in this section. Circle No. 2.

Specialists

Sewer and pipe cleaning equipment

STEWART

SINCE 1901

- SEWER RODS
- SECTIONAL STEEL RODS
- COMPLETE SEWER CLEANING MACHINES
- BRACES AND GUIDES
- BUCKETS, ROOT CUTTERS AND DRAG TOOLS

Save the expenses of experimenting. Consult Stewart for any problem in the SPECIALIZED FIELD of pipe cleaning

W. H. STEWART, INC.

P.O. Box 767, Syracuse, New York

TAPAX

The Original Manhole Cushion

Takes the BANG out of manhole covers

INSTALLING TAPAX—a matter of minutes

Brush Away Dirt & Gravel

Cut Required Length

Place Tapax sticky side down

Replace Cover

Write for Bulletin No. 10

JOSEPH G. POLLARD CO., Inc.

Pipe Line Equipment

NEW HYDE PARK, NEW YORK

Higher Pressure and LESS MAINTENANCE

ROSCO
MINNEAPOLIS

STREET FLUSHER
MODEL MTA

THE ROSCO DESIGN assures a maximum delivery ratio between horsepower and pump capacity. That's because the flusher is equipped with an enclosed impeller, self-lubricated, centrifugal pump—hydraulically balanced and mounted integrally with the power unit. End thrust to the engine crankshaft is completely eliminated. It's this design that provides maximum pressure at the flushing shoes. An important money-saving feature is that the self-lubricated pump *eliminates the need for constant daily maintenance.*

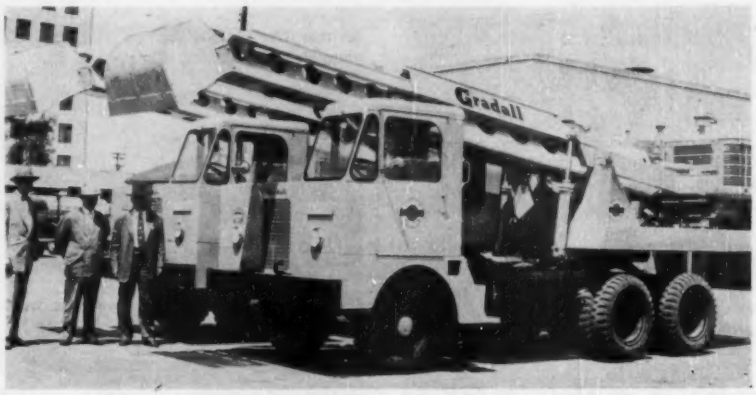
OTHER MODELS include a 2-wheel flusher . . . Model MFR for truck mounting . . . Model MBC for towing behind a truck.

YOUR ROSCO DEALER will show you how Rosco equipment can help safeguard your community's health in the most efficient way. Standard models in 1200, 1600, or 2100 gallon capacities. *Send for bulletin 54-2.*

MODEL MTA WITH CANOPY TOP

ROSCO MANUFACTURING CO.
3118 SNELLING AVE. • MINNEAPOLIS 6, MINN.

Purchasing News



Houston's street commissioner, Henry Hord (right), accepts the two units on delivery from W. P. Beerbower (center), of Highway Equipment Co., Gradall distributor in that city. Looking on is Herman Kraus, district sales representative of Warner & Swasey's Gradall Division.

New Street Equipment For Houston, Tex.

According to members of the Div. of Streets for the City of Houston, Tex., the Warner and Swasey Gradall with its hydraulically-controlled 24-ft. telescoping boom is effective in caring for many of the city's street construction, maintenance, and repair jobs. So effective, in fact, that Houston's street department recently increased its fleet of Gradall's from six to eight machines.

These machines, street officials report, not only cut costs, but save time too, by reducing the need for hand labor. For further facts, address the Gradall Div., Warner & Swasey Co., 5701 Carnegie Ave., Cleveland 3, Ohio, or use the Post Card on the colored page in this section. Circle No. 1.

SAVE up to 85% brush handling costs

This new M & M Brush Grinder rapidly converts 7 truckloads of brush into one truckload of chips.

Save on labor costs . . . truck operating costs. One man feeds brush or branches up to 6" in diameter into the Brush Grinder where they are chewed into small uniform wood chips and automatically blown into a truck or spread on the ground. The new M & M Brush Grinder is a portable unit with its own power plant. It hitches to jeep, car or truck for transportation right to the job. Safe easy operation with all moving parts fully enclosed. Nearly 100 years of experience in building fine grinding equipment is your assurance of long dependable service from an M & M Brush Grinder.

81

WRITE FOR ILLUSTRATED FOLDER TODAY

1854 100th YEAR 1954

MITTS & MERRILL 1003 S. WATER ST., SAGINAW, MICHIGAN

Discussing the recent Pax-all fleet delivery to Cambridge, Mass., are (left to right) John J. Curry, City Manager; Roman Coffin, Superintendent of Maintenance, and Ralph J. Dunphy, Commissioner of Public Works.

How Cambridge, Mass., Collects Garbage

Pictured here are the four new enclosed, compacting refuse collection bodies, purchased recently by the City of Cambridge, Mass. Each 9 cu. yd. Pax-all is mounted on a 6400 series Chevrolet chassis. Ideal for collecting wet garbage, the units make two trips daily to the Cambridge refuse dump.

A complete description of the Pax-all refuse collection truck is available from the St. Paul Hydraulic Hoist Co., 36125 Main St., Wayne, Mich. Write directly, or use the Post Card in this section. Circle No. 5.

For Fire and Police Alarms

Longer-lasting Nickel Cadmium Batteries for fire, police, and burglar alarm circuits are offered by Nife Inc., Lampert Ave., Copiague, L. I. Constructed entirely of steel, these units are said to be virtually immune to excessive discharges and occasional short circuits. They avoid sulphating, shedding, and buckling of plates.

According to the manufacturer, Nife batteries eliminate gassing during discharge and cut gassing during charge to a minimum. They don't generate corrosive gases, therefore, may be placed close to instruments and other equipment without adverse effects.

The battery is quick and simple to install. Cells are assembled in 10-cell wooden trays. These trays are placed on your rack, and the intertray cables connected. A charged battery, says the firm, can stand for months without being recharged and will still be able to deliver the required power.

Police and fire department officials interested in cutting their battery installation costs, are offered full information by the company. Write directly, or take advantage of the Post Card on the colored page in this section. Circle No. 17.

MANUFACTURER'S REPRESENTATIVES WANTED

to sell to counties, cities and towns—

a complete line of Traffic Signs utilizing Reflexite, the reflecting material now used on super highways such as Merritt Parkway, New Jersey Turnpike, etc. Also barricades, delineators, street name signs and traffic paint.

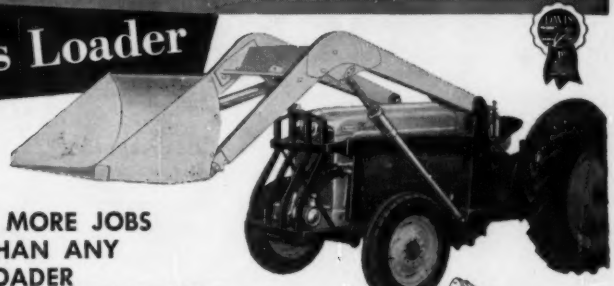
For complete information, write to

Reflexite Corp.

63 Wall Street, New York 5, N. Y.

DAY IN and DAY OUT Your Unconditionally Guaranteed

Davis Loader



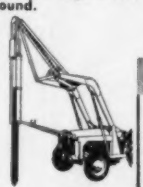
WILL DO MORE JOBS BETTER THAN ANY OTHER LOADER

There's no time out for this work horse. Convenient attachments give it year 'round useability. Exclusive features such as 12-minute attachment, box frame construction oil filter, adjustable arms that keep bucket in correct position with ground and others make it your best buy.

SHOVELS AND LOADS
Leaves, snow, dirt, and trash are easily cleared and loaded with either material or utility bucket.

DOZES
Dozer has 62" blade. Skid shoe extends full length. Permits hydraulic control of bite.

DRIVES POSTS
Powerful post driver can be operated by one man. Drives 10' high to 5' below ground.



BUSTS CONCRETE, ETC.
The handy concrete buster is made by simply attaching a chisel plate to post driver hammer. Has multitude of uses.

LIFTS BULKY MATERIAL
Heavy-duty crane is invaluable for lifting all types of bulky material.

SEND THIS COUPON FOR COMPLETE FACTS

Dept. A

Please send me literature on the Davis Loader to fit a _____ model tractor.

NAME _____

ADDRESS _____

CITY _____ STATE _____

MID-WESTERN INDUSTRIES, INC. 1009 S. WEST ST., WICHITA, KAN.

"57,000 Investors in Democracy"

HENRY FORD II

President, Ford Motor Company

"In the most practical way possible—the regular purchase of U.S. Savings Bonds—millions of Americans are demonstrating complete confidence in our form of government. Investors in democracy, they are freely staking their personal security on a fundamental faith in the future of our nation. I am proud that today more than 57,000 Ford Motor Company employees are participating in the Payroll Savings Plan. Last year they bought bonds worth $25,000,000 at face value, and this year the total of their purchases will be even greater. Through their thrift they are helping to keep America strong."

Few investment groups are as important to America as the members of the Ford Payroll Savings Plan. They are *important* in size—57,000 men and women... important in buying power—they actually purchase $25,000,000 in Savings Bonds every year... and *very* important to our economic stability—"through their thrift they are helping to keep America strong."

"Oh," someone may say, "Ford is a big company and they do things in a big way. It's easy for Ford to get thousands of people to sign up for the Payroll Savings Plan."

It was relatively easy for Ford, and it is easy for any company, large or small, to build a good Payroll Savings Plan *if*—(1) The head of the company recognizes the importance of the Payroll Savings Plan to the employees, the company, and the country; (2) *If* he will show the same degree of personal interest that Mr. Ford takes in the Ford Payroll Savings Plan.

If you would like to match Mr. Ford's Payroll Savings record—percentage-wise, of course—all you have to do is to see to it that a Payroll Savings Application Blank is placed in the hands of every man and woman in your company. It will help, of course, if you remind them, over your signature, that the Payroll Savings Plan is a safe and sure road to personal security.

The Savings Bond Division, U.S. Treasury Department, Washington, D. C., is ready to provide all the help you need in the way of Application Blanks, literature, and a complete outline of a simple, person-to-person canvass that will put an application blank in the hands of *every* one of your employees. Your employees will do the rest.

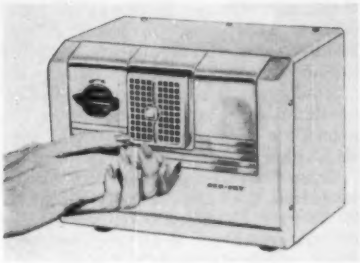
The United States Government does not pay for this advertising. The Treasury Department thanks, for their patriotic donation, the Advertising Council and

The American City

Hand Dryer-Deodorizer For Public Washrooms

An electric hand dryer that acts as a room deodorizer as well, is introduced by the Ozo Sales Corp., P. O. Box 141, New Haven, Conn. As a dryer, the unit eliminates towel expenses and reduces cleaning labor and plumbing repair costs. As a deodorizer, it destroys unpleasant odors, substituting fresh air.

Ozo-Dry is inexpensive and simple to install. Each unit is furnished with



a 2-bolt mounting bracket and plugs into any 110-volt AC outlet. An automatic timer is provided that shuts off after one minute to prevent any waste in electricity.

The new device comes in white enamel finish with chrome trim, in dimensions of 9½- x 7- x 6¾ inches. It costs $49.95, and 1,500 hand dryings are reported to cost only 23 cents.

Detailed information on the Ozo-Dry will be supplied by the manufacturer. Write, or take advantage of the Post Card on the colored page in this section. Circle No. 38.

Fire and Police Radio Station

The RCA Carfone Station Unit 15 is a complete, compact transmitter-receiver two-way radio unit designed for use as headquarters-station equipment in a mobile communications system in the 152-174 mc band. The unit can increase overall efficiency in fire department and police radio systems.

According to the company, it is designed to meet the needs of either a fixed or portable station. A recessed handle in the top permits easy carrying of the unit. Everything is included within the single cabinet, so there are no miscellaneous extras to pack into boxes or the operator's pockets.

Literature describing this portable two-way radio station unit is available on request from Engineering Products Dept., RCA Victor Div., Camden 2, N. J. For *Form C.* 302, write the company direct, or use the Post Card in this section. Circle No. 13.

12 reasons why Scott AIR-PAK is your best breathing equipment buy!

1. Ready for use in less than one minute, just turn on the valve and it's ready to go.
2. Clear visibility, cool air prevents fogging.
3. Simple to use. No practice or complicated training. Anyone can use the Air-Pak with complete confidence.
4. Fresh, cool AIR — not oxygen, for 100% protection in all breathing hazards, even explosive petroleum vapors.
5. Free and easy breathing under all conditions. No breathing restraint even during extreme exertion.
6. Triple safe regulator design proven by hundreds of thousands of hours service.
7. Positive, constant check of available air supply with dependable gage. No timer, no guesswork.
8. Full-vision face mask with diaphragm exhalation valve permits conversation.
9. The AIR-PAK is all-purpose equipment, not just rescue apparatus.
10. Economical. Operates for as little as 50c per hour. There is no waste — air that is not used may be saved for next time.
11. The AIR-PAK is completely independent of surroundings — safe in any atmosphere, in any concentration. Can even be used under water!
12. Proven. Thousands in use by business, industry and the fire service.

SINCE 1932 Scott FOR SAFETY—FOR SERVICE!

WRITE TODAY FOR COMPLETE INFORMATION!

SAFETY EQUIPMENT DIVISION

SCOTT AVIATION CORP.

191 ERIE STREET LANCASTER, N. Y.

Canada: Safety Supply Co., Toronto — Branches in principal cities
Export: Southern Oxygen Co., 157 Chambers Street, New York 7, N. Y.

AT DUSK...

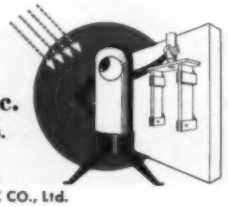
...FISHER-PIERCE
PHOTOELECTRIC CONTROL

When street lighting is controlled by Fisher-Pierce, lights *automatically* turn on the instant that natural light intensity falls below a safe level . . . regardless of time of day, season, climate or weather conditions. And, at dawn, lights remain on until natural light is sufficient for safety. No matter how modern your street lighting is, it is not adequate unless the lights are *on whenever natural light is insufficient for safety and protection.*

Fisher-Pierce Photoelectric Controls have been proven by the experience of hundreds of utilities — proven for performance, for technical operating features and for true economy.

When you consider augmenting or modernizing your street lighting, get in touch with Fisher-Pierce. The extensive Fisher-Pierce engineering service organization is at your service.

Write for Bulletin 63300C.



The FISHER-PIERCE CO., Inc.
94 Pearl St., So. Braintree, Boston 85, Mass.

EXPORT: PHILIPS EXPORT CORP.
100 E. 42nd STREET
NEW YORK 17, N.Y.

IN CANADA:
NORTHERN ELECTRIC CO., Ltd.

Purchasing

Dependable Sewage Works Valves

Evidently sewage works men agree that good valves mean good plant operation. At the recent FSIWA meeting in Miami, these men expressed great interest in the ACF full-area lubricated plug valves used where, in the past, many have used gate valves. Gate valves, apparently, can be justified in isolated locations where they are rarely operated, where little or no maintenance is available, where no throttling service is required. But when valves must be operated frequently, where men are available for proper supervision, where sludge solids must be handled and where throttling is desirable, then the operators, it seems, are very pleased to have lubricated plug valves in the system.

These valves are a product of the American Car and Foundry Co., 1501 E. Ferry Ave., Detroit 11, Mich. For full information, write the company direct or use the Post Card in this section. Circle No. 20.

Sweeps Parks, Streets, And Airports

The Yard Bird, a new power sweeper designed by Little Giant Products, Inc., 1530 N. Adams St., Peoria 3, Ill., may be pushed by anything that moves. According to the company, it attaches to fork lift- and motor trucks, industrial- and farm tractors, etc., in three minutes with the aid of special clamps.

Each unit is equipped with a Wisconsin air-cooled engine, and is capable of sweeping a path some 4 feet wide. Also a 9-cu. ft. collection hopper, and a 25-gallon sprinkler system to control dust. Mounted on three rubber-tired swivel casters, the Yard Bird is completely surrounded by a heavy bumper.

Those interested in learning more about the new units are asked to address the manufacturer direct, or use the Post Card in this section. Circle No. 8.

About People

You know or should know

When 197 employees combine to chalk up an employment record of 5,922 years with one company, it calls for a celebration. Members of the **Neptune Meter Company's** 25-Year Club honored this record recently, with an elaborate dinner held at New York's Hotel Astor. The occasion saw the admission of 12 new members to the Club, each of whom received a gold lapel pin. The 25-Year Club is headed by Michael J. Siebert, Neptune district representative in Richmond, Va., the Club's current president; Arthur C. Reichardt, first vice-president; John J. Wilkeyson, second vice-president; Anthony J. Petralia, secretary; and Gustave Hinkel, treasurer. A former president of the Club, James R. Barker, received the title of honorary president "emeritus." Speakers at the affair included John H. Ballantine, chairman of Neptune's board of directors, and Dante E. Broggi, company president.

Meeting in New York City early last month, the board of directors of the **Asphalt Institute,** New York, N. Y., elected a new chairman of the Executive Committee, Raymond Harsch, and re-elected Bernard E. Gray, president. Mr. Harsch is manager of the Asphalt Department of **Shell Oil Co.** The Institute, which represents a major part of the petroleum asphalt production industry in this country and Canada, also re-elected Herbert Spencer, secretary, and two officials of the **Socony-Vacuum Oil Co., Inc.:** George R. Christie and John N. Smith, treasurer and assistant treasurer respectively.

A manufacturer of traffic signals, floodlights, and airport-lighting equipment, the **Crouse-Hinds Co.** of Syracuse, N. Y., has named a new advertising manager. He is John B. Crosby, who until the recent appointment, acted as assistant manager of the company's publicity department. Mr. Crosby has been associated with Crouse-Hinds for the past eleven years.

John B. Crosby

The **Darling Valve and Mfg. Co.,** Williamsport, Pa., begins the New Year with two appointments, that of M. Stuart Evans as Eastern Regional sales manager, and the appointment of Joseph T. Cowan as company district representative in Tulsa, Okla. Mr. Evans, we learned, will establish residence in New York.

Fire, police and other city departments using recording machines may turn for advice to John F. Hegarty, new sales engineer for the **Dictaphone Corp.,** New York 17, N. Y. Mr. Hegarty is a former member of the **Westinghouse Electric Stairway Division.**

Chesley H. Johnson will supervise the sale of hydraulic backhoe type earth diggers for **Sherman Products, Inc.,** in the company's New York and New England territory. A resident of Worcester, Mass., he'll make his headquarters there, assuming the title of district sales manager. Sherman's main offices are located at Royal Oak, Mich.

C. H. Johnson

From Carl G. Preis, president of **Eversharp, Inc.,** we learned of the appointment of a general sales manager for the company's **Climax Engine and Pump Division,** operated independently at Clinton, Iowa. The new manager, E. D. West, with Climax for 19 years, is expected to maintain headquarters in Chicago. Fred W. Neubauer takes over as plant manager for Climax in Clinton, and Ted Skeen becomes district manager of Division sales and service throughout the midcontinent area. Mr. Skeen expects to locate in Dallas, Texas.

After long association with both the **U. S. Rubber Co.,** and the **B. F. Goodrich Co.,** John E. Spader joins the **Gamewell Co.,** Newton Upper Falls, Mass. Mr. Spader will take over as sales engineer in Gamewell's New York office.

If you happen across an advertisement of Copyflex in the future, it will be the work of Emil G. Best, former national advertising manager of the **Thor Corp.** Mr. Best has been appointed by the **Charles Bruning Co.,** Chicago, Ill., to manage all advertising of the firm's new copying machines for business and drafting-room use.

News of two promotions, this time among key executives, comes from the **Clayton Mfg. Co.,** El Monte, Calif. One official, E. S. Chapman, vice-president and general manager, has been elevated to the post of executive vice-president in charge of all company operations. Mr. Chapman will devote his time to mapping out basic policies and programs, and to integrating the activities of the company's various departments. William Clayton, the firm's president, has also named former general sales manager, J. A. Cortright, new vice-president of sales. He is expected to plan and coordinate the sales activities of three Clayton divisions: dynamometer, steam cleaner, and steam generator.

A district engineer and a field engineer both, are announced by **Marlow Pumps** of Ridgewood, N. J. The former is Roger Vannelli, scheduled to serve the 3-state area of Virginia, West Virginia, and North Carolina. Maurice C. Bickert is the firm's new field engineer, and he'll cover Southern Pennsylvania, New Jersey, Delaware, and Maryland. Mr. Vannelli will locate at Raleigh, N. C.; Mr. Bickert, in Ridgewood.

Recently retired from a 43-year association with the **Koppers Co., Inc.,** Ralph L. Spatz is now project engineer with **Michael Baker, Jr., Inc.,** a firm of consulting engineers located at Rochester, Pa. Operating from Baker's Keystone office in Beaver Falls, Pa., Mr. Spatz will handle industrial planning and development projects.

The **Cooper-Bessemer Corp.,** Mount Vernon, Ohio, reports a new branch manager, R. G. Williamson, to take charge of the firm's Los Angeles district office. According to Stanley E. Johnson, vice-president in charge of Cooper-Bessemer sales, Mr. Williamson is well versed in the engineering and operation of gas and diesel engines and compressors, having undergone training at two of the company's plants.

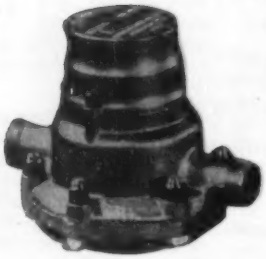
R. G. Williamson

Scheduled to manage the advertising of Payloader tractors and tractor shovels for the **Frank G. Hough Co.,** Libertyville, Ill., is Madison L. Crawford, one-time member of the **Clark Equipment Co.** Author of the Materials Handling section in the first edition of *American Society of Tool Engineers Handbook,* Mr. Crawford is noted for his national survey on materials handling methods.

H. Alden Barnes, previously vice-president and general manager of the **Wheeler Reflector Co.,** Boston, Mass., is now assistant to the president and has been replaced in his former position by John H. Lamothe. Wheeler has elected Charles D. Weston, vice-president of sales, and Fulton A. Eldridge, vice-president of production, and re-elected Kenneth A. Sawin, sales manager.

"I bought American Meters for these four reasons!"

"I thought all water meters were about alike until I took an American Meter apart, and found it had



Simplest design
Unsurpassed accuracy
Fully interchangeable parts
Exceptional performance records

These features together with the competitive price sold me on the spot. Now we're buying American."

Ask for complete literature.

BUFFALO METER CO.

2902 Main Street • Buffalo 14, New York

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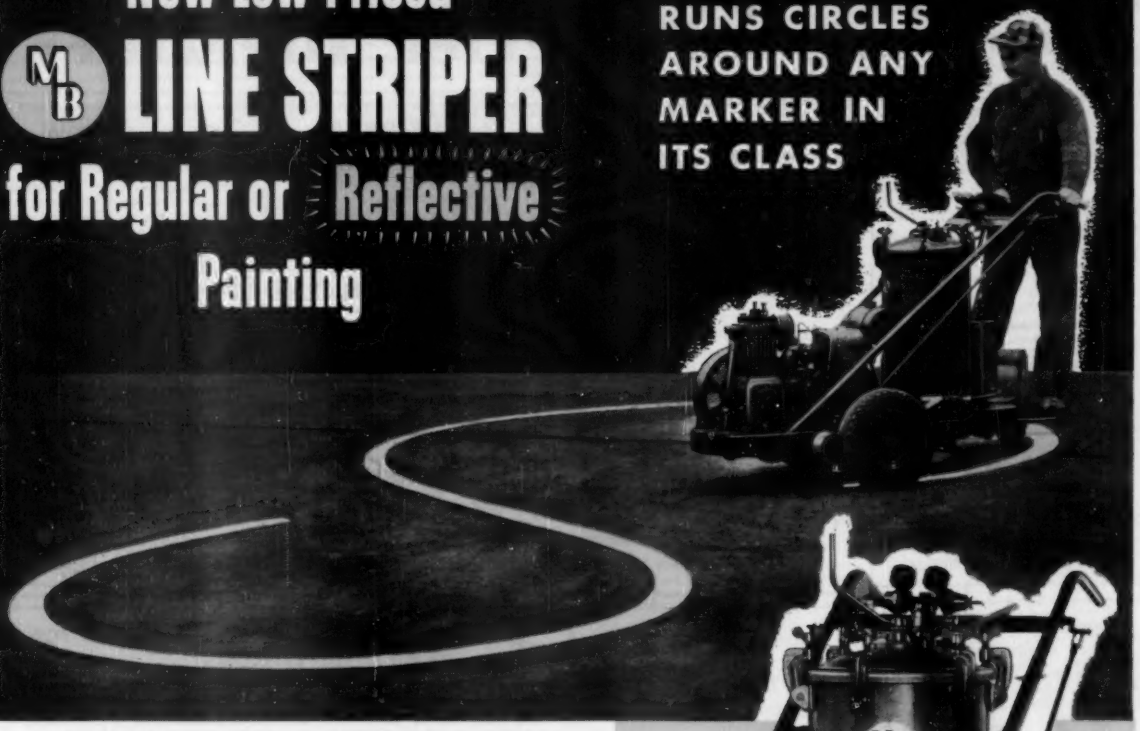

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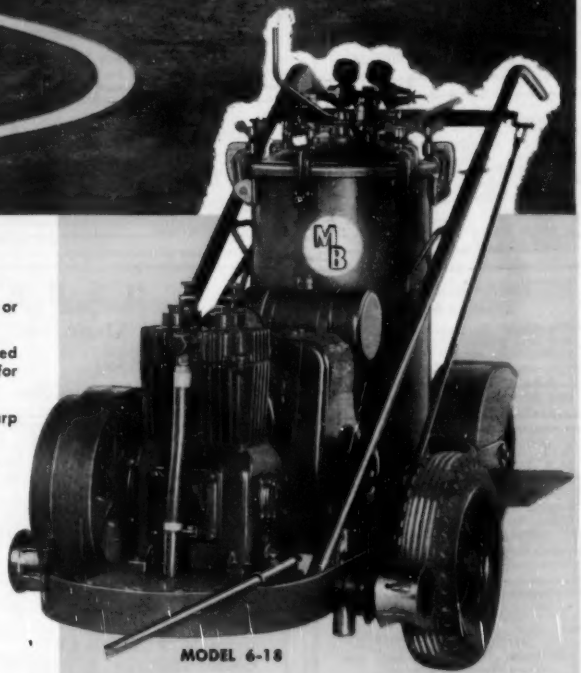

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